

حمل الآن

مجانا وحصريا

المراجعة رقم (1)

الترم الاول





Problem definition:

Problem is a situation that requires a solution or an objective you want to achieve through following consecutive steps sequentially.

Problem solving:

Problem Solving is the steps, activities, and processes to be done to reach an output or objective.

Problem solving:

Problem Solving is the steps, activities, and processes to be done to reach an output or objective.

Problem solving stages:

(1) Problem Definition

Identification of required outputs, available inputs and, arithmetic and logical operations to be executed.

(2) Algorithm Preparation

Algorithm is one of the methods used to solve a problem through logically arranged procedures (Flowchart).

(3) Program Design

we have to translate this flowchart into one of the programming language

(4) Program Testing

We cannot detect errors unless we begin entering data to the program with previously known results; and compare the results of the current.

(5) Documentation

is done to have the program documented to go back for feedback and correction. This documentation is beneficial when more than one person participates in writing or modifying the program.



Flowchart

It is a diagram that uses standard graphical symbols to illustrate the sequence of steps required for solving a problem or specific question.

Some advantages of Flowcharts:

Facilitating the reading and understanding of the problem and illustrating to the programmer what must be done.

Useful to explain the program to others helping in documenting the program in better manner, especially if the program is complicated

The most commonly used symbols as shown in the table:

Significance	Symbol
Terminal	
(input & output)	
(process)	
(Decision)	
(Flow lines)	

To construct a flowchart, we should consider the following:

1. The flowchart should start with the Start symbol and end with the End symbol.
2. A,B,C are variable names .The variable refers to a memory storage that holds a value.
3. Equation: $C = A + B$, indicates the sum of the value of A, to the value of B, and stores the result in C.



To construct a flowchart, we should consider the following:

4. Entering values in A and B is done by using the term “Enter”, inside a parallelogram, like “Read” or “Input”. 

5. The sum equation is written inside the rectangle, as it represents an arithmetic operation. 

6. The output is expressed with a parallelogram using the term “Output”, we can also use another term like “Print” or “output”. 

Note that flow line  shows the order of an Algorithm.

Chapter Two: Introduction to Visual Basic.net

The language of visual Basic .net:

It is one of the high level programming languages and designed to be easy to learn as its commands and instructions use English language vocabulary and it can be used in many applications such as:



Programming and computer memory:

Commands and instructions which are written in Visual Basic.net enable you to create objects in computer memory and every object has:

- 1- **Properties** such as (size-color- font) of the text written on the program interface.
- 2- **Events** such as click on a command button.
- 3- **Procedures**, each one contains commands and instructions



So, the Visual Basic.net is considered:

Object oriented as its programs work through objects in computer Memory.

Event Driven as commands and instructions are carried out as soon as certain event occurs.

The language of visual basic .net and framework.Net: The Framework.Net provides the following:

- * **Libraries** through which we create the objects.
- * **Runtime environment** (called Runtime) in computer memory where Applications produced by the language of Visual Basic.net language work in.
- * **Compilers** which compile commands and instructions written in Programming language into machine code which the Computer deals with.

Visual Basic .Net IDE:

The programmer of Visual Basic.net needs Integrated Development Environment (IDE) which provides tools and merits to the programmer that help him create applications (windows – mobile – web.....). Visual Studio represents IDE.

Form:

The form is the interface which the user deals with through different controls such as Button, Textbox, label.....etc. Form window before putting controls Form window after putting controls

Toolbox Window:

It contains tools of controls which can be put on the Form and can be shown in categories in the following Figure



Some of these categories include

Properties Window Menus & Toolbars Common Controls

Each tool of the above Common Controls has a group of properties which can be adjusted through "Properties Window" as shown in this Figure:

Solution Explorer

There is a list of folders and files of the projects in this part as shown in this Figure:

Chapter Three: Controls

1-The Form : has many properties which share in defining the form of program screen we want to create. Here are some properties of the Form:

N	Property Name	Function
1	Name	Name of Form used in Code Window
2	Text	The appeared Text on the title bar of the Window
3	BackColor	The background color of the Form.
4	RighttoLeft	The direction of Controls on the form Window From Right to Left.
5	RighttoLeftlayout	The layout of Controls on the Form from right to left
6	MinimizeBox	It controls the appearance or disappearance of Minimize Box of Form Window
7	MaximizeBox	It controls the appearance or disappearance of Maximize Box of Form Window
8	ControlBox	It controls the appearance or disappearance of Control Box of Form Window
9	FormBorderStyle	The Border style of Form Window
10	WindowState	It defines the Window State of the Form (Maximizing, Minimizing or normal)



- There are common properties among different Controls such as (Name-Text – Forecolor – Backcolor – Right To Left.....etc.)
- There are properties of the form, if they are set, they are applied to Controls which are placed on this Form such as font and Fore Color properties
- There are properties of the form, if they are set, they are applied to Controls which are placed on this Form such as font and Fore Color properties
- When you set some properties, the effect of setting appears directly on the Form in design mode of the program
- There are some properties which their effect doesn't appear on Controls until you set some other properties , for example the Right to Left Layout property doesn't work unless the value Right to Left equals Yes
- The default value of the property (Text) and the property (Name) is the same and it is (Form1)
- There are some properties which their effect doesn't appear on the Form or Controls until you run the program
- The other Controls may have the same properties mentioned above, so they won't be repeated again when we studying these other controls once more

2-Button

- It is one of Controls which can be placed on the Form. When you click it, it does a certain task.



Some distinctive properties of Command Button

N	Property Name	Function
1	Location	The location of placing Button on the Form.
2	Size	Defining the height and width of Button on the Form.
3	Text	The appeared Text on the Button
4	Back Color	Choosing the back Color of the Button.
5	font	Defining (shape ,size and style) of the Text font appeared on the Button.
6	Fore clor	Choosing the Fore Color to the appeared Text on the Button

3- Label: It is a tool used in showing a Text on the Form Window which can't be changed during program Runtime
Some distinctive properties of the Label::

N	Property Name	Function
1	AutoSize	The Size of the Label is defined automatically according to the written Text if the Value of property equals true.
2	BorderStyle	Choosing the Border Style of the Label

4. Text Box: It is a tool used to insert (input) data from the user during program run time.

Some distinctive properties of the Textbox:

N	Property Name	Function
1	Maxlength	It defines the maximum number of letters which can be inserted in the TextBox
2	PasswordChar	It defines a symbol used instead of written text in case we have a password.
3	Multiline	Allows multiple lines within the text box control tool.



5- ListBox

It shows a list of items.

Some distinctive properties of List Box:

N	Property Name	Function
1	Items	A group of items shown in the ListBox
2	Sorted	It defines whether the elements in the list are sorted or not.
3	Selection Mode	It defines whether it is possible to choose one item or more shown in the List Box.

6-Combo Box: A ComboBox control displays a drop-down list from which one item can be selected

Some distinctive properties of the Combo Box::

N	Property Name	Function
1	Items	A group of items which are shown in comboBox.
2	AutoCompleteSource	It is a source of suggested items to select from.
3	AutoCompleteMode	It defines the method of list completing process.

7. Group Box: Is used to group other controls of same function together on the Form window

Some distinctive properties of the Group Box::

N	Property Name	Function
1	Text	The appeared Text on the Group Box
2	Forecolor	The appeared Text on the Group Box
3	RightToLeft	The direction of Controls on the form Window From Right to Left.

8. Radio Button:

The program user selects one alternative only.



Some distinctive properties of the Radio Button

N	Property Name	Function
1	Checked	It shows whether RadioButton has been chosen or not.
2	Text	It is the Text shown on Radio Button

9-CheckBox: It is used for placing some alternatives to enable the user to select one CheckBox or more as shown in Figure.

Some distinctive properties of the CheckBox

N	Property Name	Function
1	Checked	Text shows on a Check Box (select one or more)
2	Text	It is the Text shown on CheckBox

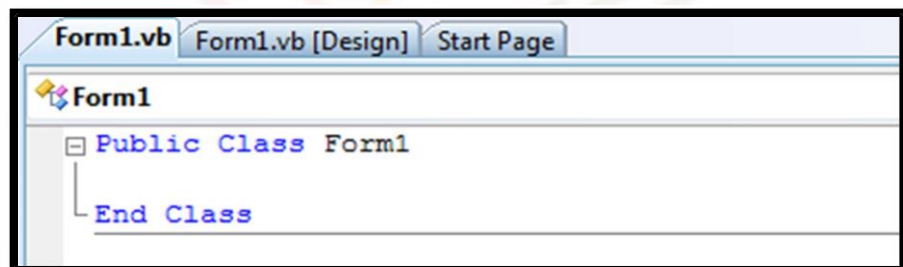
Chapter Four: Code Window

Visual Basic.NET language provides a window through which we can write instructions and codes of the program called (code window)

To open the (Code Window) of (Form1) perform the following:

1. Make sure that the window Form is active
2. From the keyboard press (F7)

The Code window is displayed as shown in the following figure



Code Window:

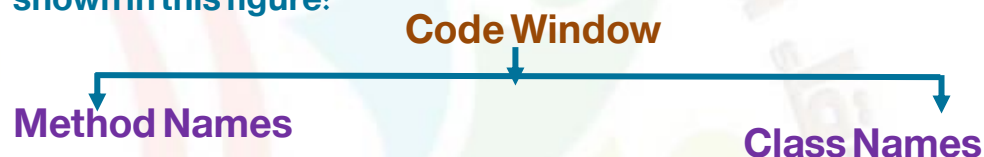
1. Name of the file where codes are saved
2. Name of the file where the Form window interface is saved
3. The declaration of Class; its name is (Form1)
4. Space between two lines; to type codes for the Class (Form1)
5. The end of the class (form 1)

Event Handler

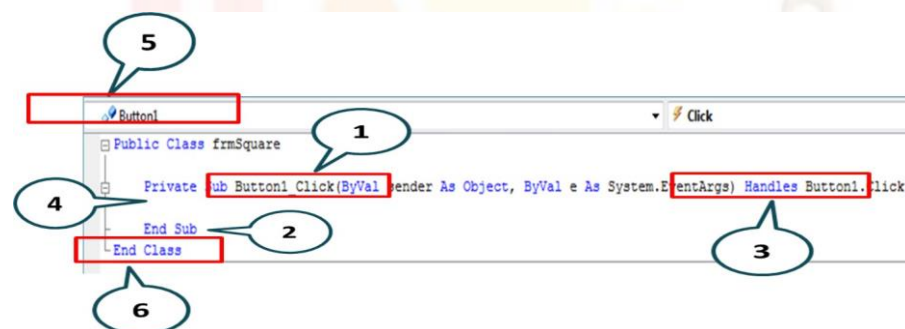
It's a procedure which contains a code that is carried out when a corresponding event occurs.

To create Event Handler do the following steps:

In the (Solution Explorer) window, right click the file (Form1.vb) and, select (View Code) from the context menu as shown in this figure:



- (1) A drop-down menu of (Class Names) that displays the names of controls on the form.
- (2) A drop-down menu of (Method Names) or events; associated with the item selected from the (Class Names) menu.





The procedure name composed of (object name, event name).

End of procedure line.

What causes the call of the procedure (event occurrence) .

Between the two lines shown; the code that will be executed on calling the procedure is written after the occurrence of the (Event).

The declaration of the class line (frmSquare).

The end of (class) line.

Setting the (Properties) programmatically

In chapter 3, we have already set the properties through properties window.

You can adjust the properties using the following syntax:

CONTROLNAME.PROPERTY=VALUE

The control or the object name

The property

The value

Notes

Object



.NET Framework



IDE

properties

Tool Box

Solution Window

form

F7

From the View menu, select the Code command

From the Solution window, choose View Code from the shortcut menu

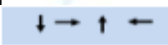
To open the code window

Some commonly used keys

F7	F5	F4
To open the Code window	Run the program / Start debugging	To open the properties window



Put (✓) or (X) :

1. The program documentation is writing down all the steps taken to solve a problem. ()
2. Problem solving is the steps, activities, and processes to be done to reach an output or objective ()
3. Algorithm is a set of procedures arranged logically for solving a specific problem. ()
4. Program code is diagram representations which depend on drawing some standard symbols to clarify the order of procedures to solve a problem. ()
5. The problem means that an objective or output is required to reach. ()
6. The program documentation is a set of procedures arranged logically for solving a specific problem. ()
7. The symbol  is used to represent a decision process in flowcharts. ()
8. The symbol  is used to represent start and end of flowchart ()
9. Flowcharts are diagram representations which depend on drawing some standard symbols to clarify the order of procedures to solve a problem. ()
10. A symbol  is used to represent a data entry process ()
11. Flowcharts help in better documentation of the program especially if the program is complex ()
12. in calculations  Trend lines are used ()
13. Branching processes cannot be represented by flowcharts ()
14. The number of branchings must not exceed 4 in flowcharts ()
15. The number of branching times should not exceed one ()
16. Through flow charts, branching processes can be represented ()
17. The number of iterations in the loop must not exceed three times ()
18. Flowcharts can represent iterations ()
19. In loops, the use of iterations increases the steps of the solution ()

20. In the loop, the number of iterations depends on the amount of increment of the counter variable ()
21. VB.Net . is a high-level programming language ()
22. Compilers are programmers that translate commands and instructions written by the programmer from the high level language into machine language. ()
23. Compilers in Framework. Net are considered the environment of runtime for applications which are produced in VB.net language. ()
24. VB.NET is a machine language. ()
25. The VB.net language can't be used in producing Windows applications ()
26. Framework.net contains Compilers, libraries and runtime environment ()
27. The property "Name" is used in showing a certain Text in the title bar of user window a name of the window. ()
28. The property Text is used in showing a certain text the title bar of user window. ()
29. Text property of the Form appears on the title bar of the Form window ()
30. Name property is the name used in the code window ()
31. The default value for the Text property and the Name property of the form is one ()
32. There are properties whose setting effect is only visible on the Form in running mode ()
33. MaximizeBox property controls whether to show or hide the form .window ()
34. FormBorderStyle property Controls whether to show or hide the form .window's maximizer box ()
35. If the form window is minimized it cannot be maximized until the program is restarted ()
36. MaximizeBox property Controls whether to show or hide the form window's maximizer box ()
37. To control the style of the window borders we use the FormBorderStyle property . ()
38. MinimizeBox feature Controls whether to show or hide the form window's maximizer box ()
39. The BackColor property controls whether to show or hide the form window ()
40. RightToLeft property specifies the direction of controls on the form window from right to left ()
41. RightToLeft property shows its effect in design mode ()

42. BackColor property allows you to choose the background color of the form window ()
43. To control the style of the window borders we use the property RightToLeft ()
44. BackColor property sets the background color gradient from right to left of the form window ()
45. You can change the position of the Button on the form using the Size property. ()
46. "Textbox control tool: is the only tool which has the property passwordChar. ()
47. Label widget can be resized manually if AutoSize=True. ()
48. "Textbox control tool: is the only tool which has the property AutoSize. ()
49. LabelA tool for entering text data from the program user while the program is running ()
50. commandbutton .is used to call code when clicked ()
51. Sorted .property specifies whether the items in the list are sorted or not ()
52. SelectionMode property specifies the number of items the ComboBox displays ()
53. Items property contains the set of items that are displayed in the ListBox. ()
54. ListBox control has the AutoSize . property ()
55. ComboBox .tool is used to display only the selected item ()
56. More than one item can be selected in the ListBox widget. ()
57. Sorted .property specifies whether the items in the list are sorted or not ()
58. SelectionMode property specifies the number of items the widget displays ComboBox ()
59. Items property contains the set of items that are displayed in the Listbox ()
60. ListBox : control has a unique feature AutoSize ()
61. ComboBox tool is used to display only the selected item ()
62. More than one item can be selected in a tool ListBox ()

Choose the correct answer:

- 1- Steps, activities and procedures to be done to reach an objective or an output - can be called:
A- problem definition b- problem c- problem solving
- 2- Problem-solving includes many terminologies, the terminology that expresses the Preparation of a cup juice is:
A- Flowchart b- algorithm c- problem
- 3-On drawing flowcharts we use:
A- standard symbols and lines b- all geometric figures c-one geometric figure
- 4- A diagrammatic representation that depends on drawing some standard symbols to clarify the order of procedures to solve a problem can be called:
A- Flowchart b- algorithm c- problem
- 5- You can produce Windows applications or Web applications by using:
A- Objects in computer memory b- VB.Net programming language c-Properties and events
- 6- libraries, Compilers and Environment of runtime of applications are the most important components of:
A- Object Oriented b- Event Driven c-.Net Framework
- 7-The used property in showing a certain Text on the title bar of a Form is :
A- Name b- Text c- form Border Style
- 8- Property Controls whether to show or hide the form window minimize box
A- MinimizeBox b- Name c- form Border Style
- 9- The style of the form window border is done through the property.....
A- Name b- Text c-form Border Style

10- The background color of the form window is determined by the property

- A- form Border Style b- Text c-BackColor

11- The function of the RightToLeft property of the Form window is:

- A- define the direction of Control tools from Right to Left. b- define whether the layout of ControlTools on the Form is from Right to Left. c- define the state of the window in a state of maximazing or minimaizing

12-You can change the position of the Button on the Form through :

- A- SetText property b- Set Location property c- Drag and drop with mouse

13-The size of Label is defined automatically on the Form if the property is:

- A- Auto Size= False b- Auto Size= True c- Auto Size=Fixed

14-The ControlTool which allows the user to choose one item of 15 in the smallest possible area on the Form is:

- A ComboBox b- ListBox c- Radio button

15- The ListBox and ComboBox share in this property :

- A- Suggest b- Items c- SelectionMode

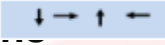
16- The ControlTool which is used in containing a group of controls that have the same function on the Form is:

- A- ComboBox b- group Box c- Textbox

17- The Control tool which can be used on the Form to choose Gender of the student "male" or "female" is:

- A- GroupBox b- CheckBox c- Radio button

Put (√) or (X) :

- 1- The program documentation is writing down all the steps taken to solve a problem. (X)
- 2- Problem solving is the steps, activities, and processes to be done to reach an output or objective (√)
- 3- Algorithm is a set of procedures arranged logically for solving a specific problem. (√)
- 4- Program code is diagram representations which depend on drawing some standard symbols to clarify the order of procedures to solve a problem. (X)
- 5- The problem means that an objective or output is required to reach. (√)
- 6- The program documentation is a set of procedures arranged logically for solving a specific problem. (X)
- 7- The symbol  is used to represent a decision process in flowcharts. (√)
- 8- The symbol  is used to represent start and end of flowchart (√)
- 9- Flowcharts are diagram representations which depend on drawing some standard symbols to clarify the order of procedures to solve a problem. (√)
- 10- A symbol  is used to represent a data entry process (X)
- 11- Flowcharts help in better documentation of the program especially if the program is complex (√)
- 12- In calculation  Trend lines are used (X)
- 13- Branching processes cannot be represented by flowcharts (X)
- 14- The number of branchings must not exceed 4 in flowcharts (X)
- 15- The number of branching times should not exceed one (X)
- 16- Through flow charts, branching processes can be represented (√)
- 17- The number of iterations in the loop must not exceed three times (X)
- 18- Flowcharts can represent iterations (√)
- 19- In loops, the use of iterations increases the steps of the solution (X)



- 20- In the loop, the number of iterations depends on the amount of increment of the counter variable (✓)
- 21- VB.Net . is a high-level programming language (✓)
- 22- Compilers are programmers that translate commands and instructions written by the programmer from the high level language into machine language. (✓)
- 23- Compilers in Framework. Net are considered the environment of runtime for applications which are produced in VB.net language. (✗)
- 24- VB.NET is a machine language. (✗)
- 25- The VB.net language can't be used in producing Windows applications (✗)
- 26- Framework.net contains Compilers, libraries and runtime environment (✓)
- 27- The property "Name" is used in showing a certain Text in the title bar of user window a name of the window. (✗)
- 28- The property Text is used in showing a certain text the title bar of user window. (✓)
- 29- Text property of the Form appears on the title bar of the Form window (✓)
- 30- Name property is the name used in the code window (✓)
- 31- The default value for the Text property and the Name property of the form is one (✓)
- 32- There are properties whose setting effect is only visible on the Form in running mode (✓)
- 33- MaximizeBox property controls whether to show or hide the form .window (✗)
- 34- FormBorderStyle property Controls whether to show or hide the .form window's maximizer box (✗)
- 35- If the form window is minimized it cannot be maximized until the program is restarted (✗)
- 36- MaximizeBox property Controls whether to show or hide the form window's maximizer box (✓)
- 37- To control the style of the window borders we use the FormBorderStyle property. (✓)
- 38- MinimizeBox feature Controls whether to show or hide the form window's maximizer box (✗)

- 39- TheBackColor property controls whether to show or hide the form window (×)
- 40- RightToLeft property specifies the direction of controls on the form window from right to left (×)
- 41- RightToLeft property shows its effect in design mode (×)
- 42- BackColor property allows you to choose the background color of the form window (✓)
- 43- To control the style of the window borders we use the property RightToLeft (×)
- 44- BackColor property sets the background color gradient from right to left of the form window (×)
- 45- You can change the position of the Button on the form using the Size property. (×)
- 46- "Textbox control tool: is the only tool which has the property passwordChar. (✓)
- 47- Label widget can be resized manually if AutoSize=True. (×)
- 48- "Textbox control tool: is the only tool which has the property AutoSize. (×)
- 49- LabelA tool for entering text data from the program user while the .program is running (×)
- 50- commandbutton .is used to call code when clicked (✓)
- 51- Sorted .property specifies whether the items in the list are sorted or not (✓)
- 52- SelectionMode property specifies the number of items the ComboBox . displays (×)
- 53- Items property contains the set of items that are displayed in the ListBox. (✓)
- 54- ListBox control has the AutoSize . property (×)
- 55- ComboBox .tool is used to display only the selected item (✓)
- 56- More than one item can be selected in the ListBox widget. (✓)
- 57- Sorted property specifies whether the items in the list are sorted or .not (✓)

- 58- SelectionMode property specifies the number of items the widget displays ComboBox (×)
- 59- Items property contains the set of items that are displayed in the Listbox (✓)
- 60- ListBox : control has a unique feature AutoSize (×)
- 61- ComboBox tool is used to display only the selected item (✓)
- 62- More than one item can be selected in a tool ListBox (✓)

Choose the correct answer:

- 1- Steps, activities and procedures to be done to reach an objective or an output - can be called:
- A- problem definition b- problem c- problem solving
- 2- Problem-solving includes many terminologies, the terminology that expresses the Preparation of a cup juice is:
- A- Flowchart b- algorithm c- problem
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كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



حمل الآن

مجاناً وحصرياً

المراجعة رقم (2)

الترم الاول



Exam Night

★ Chapter (1) Problem Solving

* A problem:

- Means a situation that requires a solution or an objective you want to achieve through following consecutive steps sequentially.

- * **A problem solving:** Means a set of the steps, activities and processes to be done to reach an output or objective.

Problem Solving Stages:

(1) Problem Definition:

- Implies the identification of required outputs, available inputs and, arithmetic and logical operations to be executed.

(2) Algorithm preparation:

- Algorithm is one of the methods used to solve a problem through logically arranged procedures.
- **The algorithm:** is represented by drawing "Flowcharts".

(3) Program design:

- Translate the flowchart into one of the programming languages, to solve the problem using a computer.

(4) Program testing:

- discover the program errors and correct them.

(5) Program Documentation:

- Writing all steps taken for solving the problem.
- **Program Documentation** is beneficial when more than one person participate in writing or modifying the program.

* Flowchart:

- It is a diagram that uses standard graphical symbols; to illustrate the sequence of steps required for solving a problem or specific question.

* Of advantages of flowcharts:

- (1) Facilitating the reading and understanding of the problem and illustrating to the programmer what must be done.

- (2) Useful to explain the program to others.
- (3) Helping in documenting the program in better manner, especially if the program is complicated.

(The most common symbols)

Symbol	Significance
	Terminal
	Input/ output
	Process
	Decision
	Flow lines

★ **Notices:**

- The flowchart should start with the **Start** symbol and end with the **End**  symbol.
- A variable refers to a memory storage that holds a value.
- The equation: $C = A + B$ indicates the sum of the value of A, to the value of B, and stores the result in C.
- Variable names are chosen to indicate the content of the variables.
- We used the term "Enter" to entering values in variable inside the parallelogram .
- We can use terms like "Read", "Input" or "Get" to to entering values in variable inside the parallelogram .
- The equations of the arithmetic operations is written inside the rectangle .
- The Output is expressed with a parallelogram  using the term "Output", we can also use another term like "Print".
- The flow line  shows the order of an Algorithm.
- The left hand side of any equation should contain only one variable; the value of this variable will be the (output) or the solution of the equation.
- The right hand side of the equation may contain abstracted values or arithmetic expressions that have one or more variables.

★ Chapter (2) Visual Basic.Net

- Visual Basic.Net language used to convert the solution steps of a problem to programming codes that can be executed.

The language of Visual Basic.Net

- Visual Basic.Net is one of the high level programming languages, it is designed to be easy to learn.
- its commands and instructions use English language vocabulary.
- Visual Basic.Net is used to create many applications such as:
 - (1) Windows applications.
 - (2) Web applications.

Programming and computer memory

- Commands and instructions which are written in Visual Basic.Net used to create objects in computer memory.

- Everyach object has:

[1] **Properties:** such as (size - colour - font) of the text written on the program interface.

[2] **Events:** is an action occur on the control, such as click on a command button or double-click.

[3] **Procedures:** each procedure contains commands and instructions which are executed when calling this procedure.

★ **Object Oriented language:** Visual Basic.Net programs are working through the objects in the computer's memory, such as: command Button, or Textbox control, or Label control.

★ Event driven language:

- The commands and instructions of the Visual Basic.Net language execute upon the occurrence of a particular event.

★ The Visual Basic.Net language and .Net Framework:

- The Framework.Net provides the following:

(1) **Libraries** through which we create the objects.

(2) Runtime environment in computer memory for running applications produced by the language of **VB.net** language called (**Runtime**).

(3) **Compilers** which compile commands and instructions written in Programming language into machine code which the Computer deals with.

Visual Basic.Net language and IDE

- The term (**IDE**) refer to **I**ntegrated **D**evelopment **E**nvironment.
- IDE provides tools and features to the programmer that help him create various applications (Windows - Web – Mobile ..).
- The Visual Studio represents the integrated development Environment (**IDE**).

Some of the components of the (IDE) window:

- [1] Form.
- [2] ToolBox.
- [3] Properties Window.
- [4] Solution Explorer.

[1] Form.

- The form is the interface which the user deals with through different controls such as Button, Textbox, label.....etc.

[2] ToolBox.

- Toolbox contains tools of controls which can be put on the Form.
- Controls are available in categories.
- There is **+** sign beside every category.
- When you click (**+**) sign, a group of tools controls appear.
- You can show all tools of controls by choosing the category (**All Windows Forms**).
- To display the Toolbox, open the **View** menu and select **Toolbox**.

[3] Properties Window.

- * Each tool of the Common Controls has a group of properties which can be adjusted through "**Properties Window**" or "**Code Window**".
- * The shown Properties in Properties Window are different according to the active part on the IDE screen.
- To display the properties window, from the **View** menu, select **Properties window**, or by clicking on the **F4** key on the keyboard.

[4] Solution Explorer.

- * There is a list of folders and files of the projects in Solution Explorer.

★ Chapter (3) Controls

- ★ The Form has many properties which share in defining the form of program screen we want to create.
- ★ All the properties of controls have default values can be changed.
- ★ There are common properties among different Controls such as (Name – Text – Forecolor – Backcolor - Right To Leftetc).
- ★ There are some properties which their effect doesn't appear on Controls until you set some other properties, for example the **Right to Left Layout** property doesn't work unless the value **Right to Left** equals **Yes**.
- ★ There are properties of the form, if they are set, they are applied to Controls which are placed on this Form such as **font** and **ForeColor** properties.
- ★ The default value of the property (**Text**) and the property (**Name**) is the same and it is (**Form1**).
- ★ When you set some properties; the effect of setting appears directly on the Form in design mode of the program.
- ★ There are some properties which their effect doesn't appear on the Form or Controls until you run the program.

((Some properties of the Form))

Property name	Function	Effect appears in
Name	Name of Form used in Code Window.	Design mode
Text	The appeared text on the title bar of the Window.	In design and runtime mode
BackColor	The background color of the Form.	In design and runtime mode
FormBorderStyle	The Border style of Form Window.	In design and runtime mode
ControlBox	It controls the appearance or disappearance of ControlBox of Form Window.	In design and runtime mode
MinimizeBox	It controls the appearance or disappearance of MinimizeBox of Form Window.	In design and runtime mode
MaximizeBox	It controls the appearance or disappearance	In design and

	of MaximizeBox of Form Window.	runtime mode
RightToLeft	The direction of Controls on the form Window From Right to Left.	In design and runtime mode
RightToLeftLayout	The layout of Controls on the Form from right to left.	In design and runtime mode
WindowState	It defines the Window State of the Form (Maximizing, Minimizing or normal).	In Runtime mode mode

- ★ A **button** control is the most commonly used.
- ★ A user will use a **button** by clicking it to perform a specific task.
- ★ When you insert any control tool from the toolbox on the form window, the default location is (0,0) zero width and zero height.
- ★ The Eight squares are used in sizing and moving the control on the Form.

((Some properties of the Button))

Property	Function	Effect appears
Name	Name of the button used in the code.	In design mode.
Text	The appeared Text on the Button.	In design and Runtime mode .
ForeColor	Choosing the ForeColor to the appeared Text on the Button.	In design and runtime mode.
BackColor	Choosing the backColor of the Button.	In design and runtime mode .
Font	Defining (shape, size and style) of the Text font appeared on the Button.	In design and runtime mode.
Location	The location of placing Button on the Form.	In design and runtime mode.
Size	Defining the height and width of Button on the Form.	In design and runtime mode.

- ★ A **label** is a control used to display a text on the form window can not be changed while running the program.
- ✧ You can change the size of Label manually by using the process of drag and drop when the Value of the property **AutoSize** is **false**.
- ✧ You can change the size of Label manually through the eight handles in design mode only and its effect appears in design mode and runtime mode.

((Some properties of the Label))

Property	Function	Effect appears
BorderStyle	Choosing the Border Style of the Label	During the design and runtime Mod.
AutoSize	The Size of the Label is defined automatically according to the written Text if the Value of property equals true.	During the design and runtime Mode.

★ **TextBox** is a tool used to insert (input) data from the user during program run time.

((Some distinctive properties of the Textbox))

Property name	Function	Effect appears
MaxLength	It defines the maximum number of letters which can be inserted in the TextBox.	Runtime mode
PasswordChar	It defines a symbol used instead of written text in case we have a password.	Runtime mode
MultiLine	Allows multiple lines within the text box control tool.	Runtime mode

★ **ListBox** is a control used for showing a list of items.

((Some distinctive properties of ListBox))

Property	Function	Effect appears
Items	A group of items shown in the ListBox.	In design and runtime Mode.
Sorted	It defines whether the elements in the list are sorted or not.	Design and runtime Mode.
SelectionMode	It defines whether it is possible to choose one item or more shown in the ListBox.	Runtime Mode.

★ **A comboBox** control displays a drop-down list from which one item can be selected in the smallest possible space on the form window.

((Some distinctive properties of the ComboBox))

Property name	Function	Effect appears
Items	A group of items which are shown in comboBox.	in design and runtime mode.
AutoCompleteSource	It is a source of suggested items to select from.	in runtime mode.
AutoCompleteMode	It defines the method of list completing process.	in runtime mode.

- ★ **GroupBox** is used to group other controls of same function together on the Form window.

((Some distinctive properties of the GroupBox))

Property	Function	Effect appears
Text	The appeared Text on the control tool.	In design and runtime mode
ForeColor	Choosing the ForeColor to the appeared Text on the control tool.	In design and runtime mode
RightToLeft	Determine the direction of Control.	In design and runtime mode

- ★ **A RadioButton** is used to select one alternative only.

((Some of the RadioButton properties.))

Property	Function	Effect appears
Text	It is the Text shown on RadioButton.	In design and Runtime Mode
Checked	It shows whether RadioButton has been chosen or not.	In Runtime Mode

- ★ **(CheckBox)** allows to a program user a range of the alternatives to choose an alternative or more.

((Some of the Checkbox properties.))

Property	Function	Effect appears
Text	It is the Text shown on CheckBox .	In design and Runtime Mode

Checked

It shows whether **CheckBox** has been chosen or not.

In Runtime Mode

★ Chapter (4) Code Window

- **Visual Basic.Net** language provides a window through which we can write instructions and codes of the program called (**code window**).

- To open the (**Code Window**) perform the following:

- (1) Make sure that the Form window is active.
- (2) Press (**F7**) from the keyboard.

- **Main components of Code window:**

- (1) Name of the file where codes are saved.
- (2) Name of the file where the Form window interface is saved.
- (3) The declaration of **Class**; its name is (**Form1**).
- (4) Space between two lines; to type codes for the Class (**Form1**).
- (5) The end of the **Class** (**Form1**).

- **Event Handler** is a procedure which contains a code that is carried out when the associated event occurs.

To create event handler:

- In the (**Solution Explorer**) window, right click the file (**Form1.vb**), and select (**View Code**) from the context menu.

* **When choosing (View Code) the lists will be used:**

- (1) A drop-down menu of (**Class Names**), that displays the names of controls on the form.
- (2) A drop-down menu of (**Method Names**) or events; associated with the item selected from the (**Class Names**) menu.

- **Setting the properties programmatically:**

Control (Object) Name . Property = Value



*** First: Complete the following sentences from words between brackets:**

(Name - items - event handler - Class name - .NET Framework -
Visual Studio - Text)

- (1) The property is used with the ListBox control.
- (2) The Property..... is used to change the text appeared on the tool.
- (3) contains compilers, libraries and runtime environment of VB.net.
- (4) is a procedure which contains a code that is carried out when a corresponding event occurs.
- (5) The term **IDE** refers to
- (6) is a menu in the code window, which display the name of control on the form.

*** Second: Rewrite the following sentences after correcting underlined words:**

- (1) The properties window is the interface, which the user deals with through different controls.
- (2) Button is a control tool used to insert (input) data from the user during program run time.
- (3) The RadioButton control allows selecting one or more alternatives at the same time.
- (4) Label control can be used on the Form to choose the Gender of student male or female.
- (5) BackColor property is defining (shape, size and style) of the Text font appeared on the Toolbox tool.
- (6) GroupBox contains tools of controls which can be put on the Form.

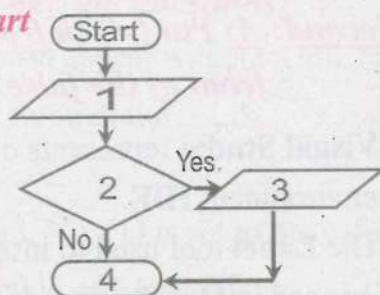
*** Third: A: Put (✓) for the true sentence and (x) for the wrong one:**

- (1) To open the code window, press F5 key 7. ()
- (2) VB.net language is one of the event-oriented programming languages. ()

- (3) To set the properties programmatically we use the formula
(Control Name. Value = Property). ()
- (4) The Solution explorer contains a list of project files and folders. ()

B: Complete the corresponding flowchart

by writing the appropriate solution steps inside it (instead of numbers) to print the word "successful" if (the subject's score X) is greater than or equal to 50:



*** First: A: Answer the following questions:**

- (1) Draw a flowchart for the algorithm.
- (2) The purpose of the flowchart is
- (3) If the value of X is equal to (6), step No. won't be executed and the execution will be transferred to step no
- (4) If the value of X is equal to (4), the execution will be transferred to step No

- 1- Start
- 2- Enter X
- 3- If $X=5$ Then
 - 3-1 Print "Equal 5"
- 4- Else
 - 4-1 If $X>5$ then
 - 4-1-1 Print "Greater than 5"
 - 4-2 Else
 - 4-2-1 Print "less than 5"
- 5- End

B: Write a code to do the following:

- (1) Make the items in **ListBox2** appear sorted of their entry.
- (2) The maximum number of letters which can be inserted in the **TextBox5** equal 10 letters.

*** Second: A: Put (✓) in front of the true sentence and (x) in front of the false one:**

- (1) **Visual Studio** represents of an integrated development environment **IDE**. ()
- (2) The **Label** tool used to insert data from the user and its can't be changed in **Runtime** mode. ()
- (3) If the value of the **Size** property = (70,55) for the button tool, the height is equal to 70 and the width is 55. ()
- (4) To open the code window, choose the **View Code** from the **View** menu. ()
- (5) The command button is inserted into the form window by double clicking on the button tool from the toolbox in the runtime mode at the point (0,0) at the top of the screen. ()

B: Select the different:

- (1) Input - Enter - Output - Read
- (2) Runtime - Objects - Compilers - Libraries
- (3) Control name - Event - Property - Value
- (4) Size - Color - Instructions - Font Name
- (5) **ControlBox** - **MaximizeBox** - **AutoSize** - **MinimizeBox**

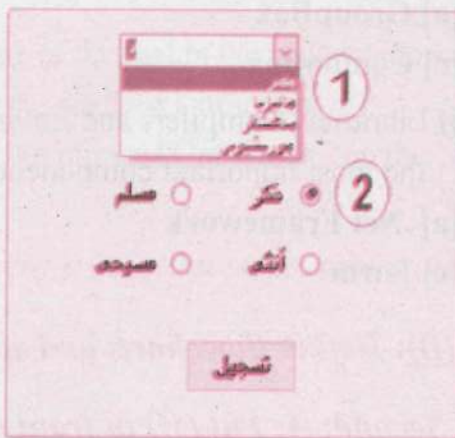
*** Third: A: Choose the appropriate answer from the brackets:**

- (1) Control tools are shown into categories including:
(Common Controls – Menus – Toolbars)
- (2) Wearing the right shoes, preparing travel missions, and climbing training is an example of
(Problem – Problem solving – Algorithm)

- (3) Arithmetic or logical processing operations are carried out in the stage: (Algorithm – Problem solving – Problem Definition)

B: Check the following Form and answer the questions:

- (1) The ... property has been set to make the form appear without a title bar.
- (2) Items of tool No. (1) have been included through the property, the effect of which appears in
- (3) The **AutoCompleteMode** property of tool, No. (1) is set to the value and the property on the value of **ListItems**.
- (4) The property was set for tool No. (2) to True, to indicate that the tool has been chosen.
- (5) To allow the selection of a button (ذكر أو أنثى) and at the same time button (مسلم أو مسيحي), use the tool



*** First: (A): Choose the correct answer from brackets:**

- (1) The Procedures term refers to:
- [a] Properties that describe the object.
 - [b] Events that can occur to the object.
 - [c] Commands and instructions that are carried out.
 - [d] All of the previous.
- (2) The code (Labell. Autosize = True), the part (Label1) represent:
- [a] Property
 - [b] Control name
 - [c] Value
 - [d] Event

- (3) You can produce Windows applications or Web applications by using:
- [a] Objects in computer memory [b] VB.net language
[c] Properties [d] Event
- (4) The following properties belong to TextBox except for:
- [a] AutoSize [b] MultiLine
[c] MaxLength [d] Password char
- (5) The control allows selecting one or more alternatives at the same time.
- [a] GroupBox [b] Checkbox
[c] ComboBox [d] Nothing of the previous
- (6) Libraries, Compilers and Environment of runtime of applications are the most important components of:
- [a] .Net Framework [b] Object
[c] Form [d] Nothing of the previous

(B): Define flowcharts and mention two of their advantages?

**** Second: A: Put (✓) in front of the true sentence and (x) in front of the false one:***

- (1) **Problem** is a situation that requires a solution or an objective you want to achieve. ()
- (2) You can change the size of Label manually if AutoSize = True ()
- (3) The Property **FormBorderStyle** is used to change the border of the form. ()
- (4) Placing Controls automatically on the Form on the co-ordinate (0-0). ()
- (5) The ComboBox control is used to display a list for selecting one or more items. ()
- (6) Method Name is a menu in the code window which display the name of control on the form. ()

B: Write the scientific term of each of the following statements:

- (1) A property that is used to specify whether one or more items in the tool **ListBox** will be selected.
- (2) Allows the user to choose only one alternative, such as male or female.
- (3) Writing down all the steps taken to solve a problem.

*** Third: A: Complete the following with the appropriate word:**

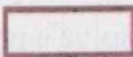
- (1) is a window through which we can write instructions and codes of the program, of Visual Basic.Net .
- (2) Complete the following code to change the text color to red.
Button1. =
- (3) The property (.....) indicates the name of the tool in the code window.
- (4) We write the code, to make the ListBox1 items sorted.
- (5) We write the code, to show the phrase "Get Green" on the Label3 tool.

B: Draw a flowchart of the following solution steps, and state the purpose of the flowchart?

- 1- Start
- 2- Enter N
- 3- If N is divisible by 2 without a remainder, then:
 - 3-1 Print "Even number"
- 4- Other:
 - 4-1 Print "Odd number"
- 5- End

*** First: Put (✓) in front of the true sentence and (x) in front of the false one:**

- (1) Textbox control tool: is the only tool, which has the property PasswordChart. ()

- (2) The program documentation is a set of procedures arranged logically for solving a specific problem. ()
- (3) The problem means that an objective or output is required to reach. ()
- (4) The VB.net language is one of Event Driven languages. ()
- (5) The rectangle symbol  is used to represent the data input process. ()

*** Second: Fill in the blanks using the following words to make the sentence correct:**

(Label – Event handler – Events – RadioButton – CheckBox)

- (1) is a procedure, which contains a code that is carried out when a corresponding event occurs.
- (2) The Control tool, which can be used on the Form to choose Gender of the student "male" or "female" is
- (3) The Control Tool which can be used on the Form and allows the user to choose more than one alternatives is
- (4) A tool used in showing a text on the Form Window which can't be changed during program runtime.
- (5) The term refers to events that can occur to the object.

*** Third: Choose the correct answer from the brackets:**

- (1) To open the code window, press (.....) key. (F5 – F1 – F7)
- (2) Characteristics which describe the object such as size, name and color are called: (Properties – Procedures – Events)
- (3) You can produce Windows applications or Web applications by using: (Objects in computer memory – VB.net language – Properties and Events)
- (4) ... is the tool used in contains a group of controls, these controls have the same function on the Form. (ComboBox – GroupBox – ListBox)
- (5) The property which is responsible for the size, shape and effect of the text font shown on the Button is: (Font – ForeColor – BackColor)

* **Fourth:** Fill in the blanks in the flowchart in column (b) using the data in column (a), to print the numbers 1 to 3.

(A)	(B)
End	<pre> graph TD Start([Start]) --> Box1[] Box1 --> Cond1{ } Cond1 -- True --> Box2[] Box2 --> Cond2{ } Cond2 -- False --> End([]) </pre>
Print M	
$M \leq 3$	
$M = 1$	
$M = M + 1$	

EI-BUHAYRA GOVERNORATE



2023

محافظة البحيرة

5

* **First:** Put (✓) in front of the true sentence and (x) in front of the false one:

- (1) You can use any Geometric shape to represent Algorithm when drawing flowcharts. ()
- (2) The problem means that an objective or output is required to reach. ()
- (3) The function of the property **RightToLeft** of the Form is to define the direction of Controls from right to left. ()
- (4) The effect of setting the **WindowState** property of the form appears only in runtime mode. ()
- (5) The **ListBox** and **ComboBox** share in **Items** property. ()
- (6) The VB.net language is the only high level language. ()

* **Second:** Choose the correct answer from the brackets:

- (1) A set of procedures arranged logically for solving a specific problem can be called: (Problem - Algorithm - Program testing)
- (2) Double-click on Button is: (Property - Procedure - Event)
- (3) You can change the location of command Button on the Form through property. (Location - Size - Name)
- (4) Object TextBox is marked by one property. (AutoSize - Name - PasswordChare)

(5) The name of the file that saves the code:

(Form1.Vb - Form1.Vb Design - Start Page)

(6) Line is the end of Class (Form1):

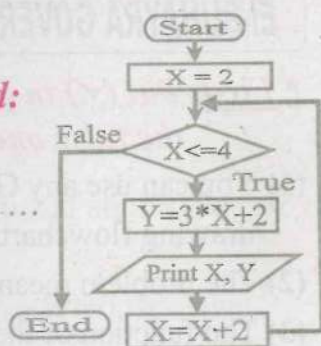
(End Class - End Sub - Public Class)

*** Third: Write the scientific term of each of the following statements:**

- (1) The Control Tool which is used in containing a group of controls that have the same function on the Form.
- (2) Writing down all the steps taken to solve a problem.
- (3) Characteristics, which describe the object such as size, name and color.
- (4) It is a menu in the code window which display the name of control on the form.

*** Fourth: In the corresponding flowchart find:**

- (1) The number of iterations is
- (2) The values of (Y) when execution each step
- (3) The value of X after the end of the iterative loop equals



DAMYAT GOVERNORATE



2023

محافظة دمياط

6

*** First: Put (✓) in front of the true sentence and (x) in front of the false one:**

- (1) You can use any geometric shape when drawing flowcharts. ()
- (2) The properties displayed in the Properties window, differ according to the active part of the IDE screen. ()
- (3) VB.net language is one of the event-oriented programming languages. ()
- (4) .Net Framework contains compilers, libraries and runtime environment of VB.net. ()
- (5) Property (MinimizeBox) control the appearance or disappearance of ControlBox in the Form. ()

*** Second: Choose the correct answer from the brackets:**

- (1) Making sure that the program is free of errors – can be called:
(Program testing - Program documentation - Algorithm)
- (2) Steps, activities and procedures to be done to reach an objective or an output - can be called:
(Problem definition - Problem - Problem solving)
- (3) Characteristics which describe the object such as size, name and color are called:
(Properties - Procedures - Events)
- (4) The property which is responsible for the size, shape and effect of the text font shown on the Button is: (BackColor - Forecolor - Font)
- (5) The control tool TextBox have a unique property
(Name - AutoSize - PasswordChar)

*** Third: Complete the following sentences:**

- (1) Problem-solving approach includes many of the terminologies, the terminology that expresses the mathematical problem is
- (2) The ListBox and ComboBox share in this property
- (3) is the control tool that allows the user to choose one element of several elements in the smallest possible space on the form window.
- (4) You can change the size of Label manually if AutoSize =
- (5) To open the Code Window, press the key

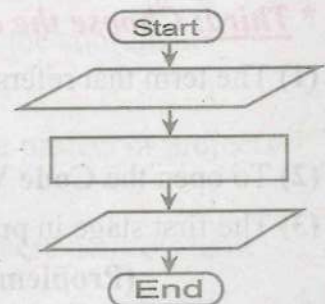
*** Fourth:**

A: Define event handler?

B: Explain the following codes through your pervious study for the general syntax to adjust the properties of control programmatically:

Button2.Text ="End"

C: Complete the flowchart to print the sum of two numbers (A and B) and the summation result (C):



ALEXANDRIA GOVERNORATE



2023

محافظة الإسكندرية

7

*** First:** Put (✓) in front of the true sentence and (x) in front of the false one:

- (1) The **label** tool allows the user to choose more than one alternative. ()
- (2) **PasswordChar** is one of the common properties among different control tools. ()
- (3) **Flowchart** helps in documenting the program in a better manner. ()
- (4) The **VB.Net** language is one of the event driven languages. ()
- (5) We can use branching in the Flowcharts. ()
- (6) To change the form name in the code window to be Egypt, use the code (Form1.Text = "Egypt"). ()
- (7) **Event Handler** is a procedure containing a code that is carried out when a corresponding event occurs. ()

*** Second:** Put each word of the following words in the suitable place:

(Compilers – Checked – End Sub – Button – Algorithm)

- (1) is one of the control tools. When you click it, it does a certain task.
- (2) is the end of the procedure line.
- (3) compile commands and instructions written in programming language into machine code.
- (4) is one of the used methods to solve the problem through logically arranged procedures.
- (5) is one of the **RadioButton** properties.

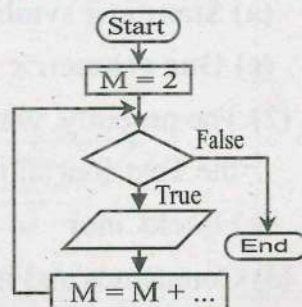
*** Third:** Choose the correct answer from brackets:

- (1) The term that refers to the feature that describes the object is
(Events – Solution Explorer – properties)
- (2) To open the **Code Window**, press the key (F1 – F7 – F5)
- (3) The first stage in problem solving is
(Problem definition – program testing – program design)

- (4) The property that defines whether the elements in the **ListBox** are arranged or not is (Items – Sorted – SelectionMode)
- (5) The property that controls the appearance or disappearance of the Maximize Box of the form window is
(Maximize Box – RightToLeft – WindowState)

** Fourth: Look at the flowchart which prints the even numbers from 2 to 6. Then choose the correct answer from brackets:*

- (1) The command that represents the decision is
(M=6 – M<>6 – M<=6)
- (2) To print the value of M, use the command
(Print M – Enter M – Read M)
- (3) The increment of the variable value (M) is
(1 – 2 – 6)



CAIRO GOVERNORATE



2023

محافظة القاهرة

8

** First: Put (✓) in front of the true sentence and (x) in front of the false one:*

- (1) **Algorithm** is a set of procedures arranged logically for solving a specific problem. ()
- (2) To open code window from Keyboard press **F7**. ()
- (3) Compilers are programs that translate commands and instructions written by the programmer from the high level language into machine language. ()
- (4) Placing Controls automatically on the Form on the coordinate (0-0) is in the middle of the Form. ()
- (5) **Toolbox** display a list of folders and files of the project or projects within the Solution. ()
- (6) A tool used in containing a group of controls, these controls have the same function on the Form is **ListBox**. ()

- (7) **ComboBox** is the control tool that allows the user to choose one element of several elements in the smallest possible space on the form window. ()
- (8) The program testing is means making sure that the program is free of errors. ()

*** Second: Choose the correct answer:**

- (1) On drawing flowcharts we use
- (a) Standard symbols and lines (b) all geometric figures
- (c) One geometric figure
- (2) The property, which is responsible for the size, shape and effect of the Text font shown on the Label is
- (a) BackColor (b) Font (c) ForeColor
- (3) Commands and instructions, which we want to carry out are called:
- (a) Properties (b) Procedures (c) Events
- (4) You can change the position of the Button on the Form through the following processes except for
- (a) Drag and drop by the mouse (b) Setting Size property
- (c) Setting Location property
- (5) IDE is called
- (a) Visual Studio (b) .Net Framework (c) VB.NET
- (6) The Control tool, which can be used on the Form to choose Gender of the student "male" or "female" is
- (a) RadioButton (b) TextBox (c) CheckBox
- (7) Visual Basic.NET language provides a window through which we can write instructions and codes of the program called
- (a) Form window (b) Code window (c) Property window
- (8) A procedure which contains a code that is executed when a corresponding event occurs is
- (a) Control tool (b) Property (c) Event handler

*** Third:** Complete the following Flowchart in column (B) Which is used to calculate division of two numbers and if the divisor equal zero display "undefined" message using the Steps from column (A):

- Knowing that: number1 is N1, number 2 is N2, and result is R:

Solving Steps (A)	Flow Chart (B)
1. Print R	<pre> graph TD Start([Start]) --> InputN1[/Input N1/] InputN1 --> InputN2[/Input N2/] InputN2 --> Decision{N2=0} Decision -- Yes --> PrintUndefined[/Print "Print undefined"/] Decision -- No --> ProcessR[R = N1 / N2] ProcessR --> PrintR[/Print R/] PrintUndefined --> End([End]) PrintR --> End </pre>
2. Input N2	
3. End	
4. N2=0	

ALSHARQIA GOVERNORATE



2023

محافظة الشرقية

9

*** First:** Put (✓) or (x) in front of the following sentences:

- (1) The program testing is writing down all the steps taken to solve a problem. ()
- (2) Every Object is characterized by certain properties and certain behaviour when a certain event occurs on it. ()
- (3) You can change the location of command Button on the Form through Size property. ()
- (4) The ListBox and ComboBox share in Suggest property. ()
- (5) You can change the value of the object property using properties window only. ()

*** Second:** Choose the correct answer from the following:

- (1) A set of procedures arranged logically for solving a specific problem can be called:
 - a) Problem
 - b) Algorithm
 - c) Program testing
- (2) IDE is called:
 - a) Visual Basic.net
 - b) Visual Studio.
 - c) .Net Framework.

(3) The effect of setting this property doesn't appear unless in runtime mode (this property is):

- a) **FormBorderStyle** b) **RightToLeft** c) **WindowState**

(4) To open the code window, press key.

- a) **F4** b) **F7** c) **F5**

(5) A tool used in containing a group of controls, these controls have the same function on the Form is ...

- a) **CompoBox** b) **ListBox** c) **GroupBox**

** **Third: A:** Explain the following codes through your pervious study for the general syntax to adjust the properties of control programmatically:*

(1) `Button2.Text = "END"`

(2) `Label1.AutoSize = True`

B: Complete the following:

(1) contains Compilers, libraries and runtime environment.

(2) The Control tool which can be used on the Form to choose Gender of the student "male" or "female" is

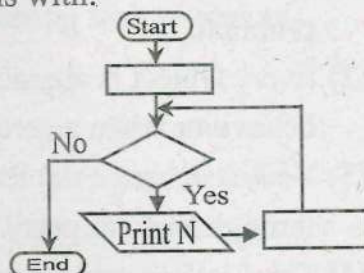
(3) The is the interface which the user deals with.

** **Fourth: Here is a flowchart for printing odd numbers 1 through 10:***

***A:** Fill in the flowchart.*

***B:** The number of iterations (print the value of N) is*

***C:** The value of N after the end of the iterative loop equals:*



** **First: Correct the underlined words:***

(1) The name, the size and color of an object are all samples of Events that describe the object in Visual Basic.

(2) The control tool ListBox is used to group other controls of same function together on the Form Windows.

- (3) **Flowchart** is a situation that requires a solution or an objective you want to achieve through consecutive steps sequentially.
- (4) The control tool **CheckBox** is used on the Form to select one alternative only.
- (5) **Program Documentation** implies the identification of required outputs, available inputs and, math and logical operations to be executed.

** **Second:** Write the scientific term of each of the following statements:*

- (1) The steps, activities, and processes to be done to reach an output or objective
- (2) A window in **IDE** screen contains a list of folders and files of the projects.
- (3) A tool used in showing a text on the Form Window which can't be changed during program runtime.
- (4) The window through which we can write instructions and codes of the program.
- (5) Some of logically arranged procedures to solve a problem.

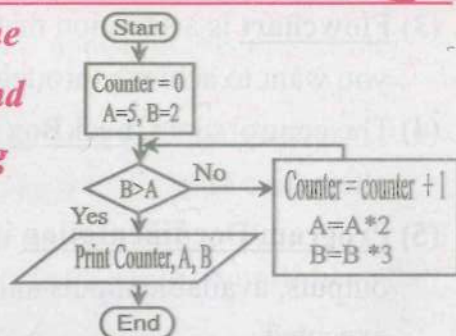
** **Third:** **A:** Choose the correct answer from the following:*

- (1) The control tool **TextBox** have a unique property
- a) **ForeColor** b) **PasswordChar** c) **Name**
- (2) The language of Visual Basic.NET is
- a) **Object Oriented** b) **High Level Language** c) a and b
- (3) To determine the color of appeared text on the Button. We use
- a) **ForeColor** b) **Font** c) **BackColor**

***B:** Give the reason:*

- (1) When the program run the **Form1** window is full screen.
- (2) When the program run the **TextBox1** not allow to input more than 8 letters in it.

*** Fourth: A: Get the final result of the variables Counter, A, B after the end of the iterative loop in the following Flowchart:**



B: Read the code and complete the following statements:

```

Private Sub Button1_click(sender As Object, e As EventArgs) Handles
Button1.click
    Form1.Text = " تكنولوجيا المعلومات "
End Sub
  
```

- (1) The control tool that the event will occurs on it
- (2) The property was adjusted is

GIZA GOVERNORATE



2023

محافظة الجيزة

11

*** First: Fill in the blanks with the appropriate word in the brackets:**
(Algorithm – Framework – ComboBox – Solution Explorer – Code window)

- (1) It is a drop-down list of items to choose from.
- (2) provides the libraries through which we create the objects.
- (3) display a list of folders and files of the project within the Solution.
- (4) through which we can write instructions and codes of the program.
- (5) is one of the used methods to solve the problem through logically arranged procedures.

*** Second: Put (✓) in front of the true sentence and (x) in front of the false one:**

- (1) The property "Name" is used in showing a certain text in the title bar of user window a name of the window. ()
- (2) You can set the properties of the controls through the toolbox. ()

- (3) The property (**Checked**) indicates whether Radio Button has been selected or not. ()
- (4) The effect of setting the **WindowState** property of the form appears only in runtime mode. ()
- (5) To open the code window, press **F9** key from the keyboard. ()

** **Third:** From your study of flowcharts, draw a flowchart to get the temperature and then print "greater than zero" or "less than zero":*

Solution steps	Flowchart
(1) Start	
(2) Enter D (temperature)	
(3) If $D < 0$	
(4) Print "below zero"	
(5) Otherwise "Print above zero"	
(6) End	

** **Fourth:** Rewrite the following sentences after correcting the underlined words:*

- (1) The property **ForeColor**, that defines the background color for the command button.
- (2) The function of the code (Button5.Text="End") is to **terminate the program**.
- (3) **ListBox** is the tool used in contains a group of controls, these controls have the same function on the Form.
- (4) The **MinimizeBox** property that controls the appearance or disappearance of the of the form window



** **First:** Put a tick (✓) or (x) in front of each of the following sentences:*

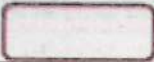
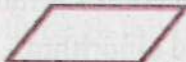
- (1) A set of procedures arranged logically for solving a specific problem can be called algorithm. ()

- (2) Flowcharts are schematic representations, which depend on drawing some standard symbols. ()
- (3) The code window is a component of the integrated development environment (IDE). ()
- (4) To run the project in vb.net, press the F5 key. ()
- (5) **GroupBox** is the tool used in contains a group of controls, these controls have the same function on the Form. ()
- (6) **AutoSize** is the unique property that is to an object **TextBox**. ()

** **Second:** Choose the appropriate answer to complete each phrase of the following:*

- (1) means that an objective or output is required to reach.
 a) Flowchart b) The problem c) Algorithm
- (2) We use the ... property to set the background color of the form window.
 a) BackColor b) ForeColor c) AutoSize
- (3) is writing down all the steps taken to solve a problem.
 a) Algorithm b) The problem c) Program documentation
- (4) The properties displayed in the window, differ according to the active part of the IDE screen.
 a) IDE b) Properties c) Tools
- (5) Visual Basic.NET language provides a window through which we can write instructions and codes of the program called.
 a) Form b) Properties c) Code
- (6) The default value for the (Text) and (Name) properties of the form window is: a) Same one b) different (c) All of the previous

** **Third:** Match in column (A) to the symbol in column (B):*

(A)		(B)	
1	$A \geq 50$	A	
2	Print "successful"	B	
		C	

*** Fourth: Correct the underlined:**

- (1) The code window is the window that contains the controls.
- (2) An ellipse is the one that expresses the direction of the flow of operations in the flowchart

ASYUT GOVERNORATE



2023

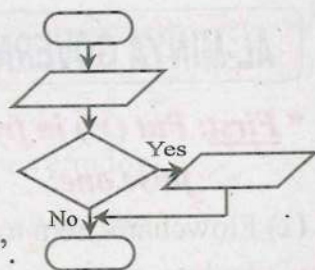
محافظة أسيوط

13

*** First: Put (✓) or (x) in front of the following sentences:**

- (1) The **AutoCompleteMode** property defines the method of list completing process for **ComboBox** tool. ()
- (2) One of the disadvantages of flowcharts is that they are not useful in explaining the program to others ()
- (3) The effect of setting the **RightToLeft** property to yes of the form, appears only in runtime mode. ()
- (4) The default value of the Text property and the Name property is the same, which is Form1 for the form window. ()
- (5) The VB.net language is one of the high level languages. ()

*** Second: Complete the flowchart: To print the word "successful" if the entered score is greater than or equal to 100:**



- knowing that!

Outputs: Print successful. **Input:** The degree "X".

*** Third: Complete the following with the appropriate words in brackets:**

(Event Oriented - WindowState - Solution Explorer - Class name - Problem)

- (1) is a situation that requires a solution or an objective you want to achieve through consecutive steps sequentially.
- (2) is a menu, which display the name of control on the form.
- (3) Property (....) determine the case of the form window in a position (Zoom in, zoom out or normal).

- (4) display a list of folders and files of the project or projects within the Solution.
- (5) VB.Net language is called because commands and instructions are carry out when a certain event occurs.

*** Fourth: Choose the correct answer from the brackets:**

- (1) The Control Tool which can be used on the Form and allows the user to choose more than one alternatives is:
(RadioButton – GroupBox – CheckBox)
- (2) Libraries, Compilers and Environment of runtime of applications are the most important components of:
(Object Oriented. – Event Driven – .Net Framework.)
- (3) one of the properties features of the (Label) control.
(BorderStyle – AutoSize – All of the previous)
- (4) Characteristics which describe the object such as size, name and color are called:
(Properties – Procedures – Events)
- (5) Integrated development environment is called:
(Visual Basic.net – IDE – .Net Framework)



*** First: Put (✓) in front of the true sentence and (x) in front of the false one:**

- (1) Flowcharts help to facilitate understanding of the problem, analyze and convert it to a program. ()
- (2) You can change the size of Label manually if **AutoSize = False** ()
- (3) All programming languages, which carry out a group of commands and instructions are considered as Event Driven languages. ()
- (4) The rectangle symbol  is used to represent the data input process. ()
- (5) You can change the location of command Button on the Form through Location property. ()

*** Second:** Choose the appropriate answer to complete each statement from the following:

- (1) Writing down all the steps taken to solve problem errors – can be called:
 - a) Program documentation b) Program testing c) Flowcharts
- (2) Click on Button is:
 - a) Property b) Procedure c) Event
- (3) The used property in showing a certain text on the title bar of a Form is:
 - a) Name b) Text c) FormBorderStyle
- (4) A schematic representation that depends on drawing some standard symbols to clarify the order of procedures to solve a problem can be called:
 - a) Problem b) Algorithm c) Flowchart
- (5) The Control tool which can be used on the Form to choose Gender of the student "male" or "female" is:
 - a) RadioButton b) CheckBox c) TextBox

*** Third: A:** Write what the numbers refer to, using the data of the attached table:

Property		.		=	
Control Name	1		2		3
Value					

B: Type the different word below:

- (1) Get – Print – Read – Input
- (2) Form window – Toolbox – Flowchart – Properties window

*** Fourth:** Write inside each symbol of the flowchart the appropriate commands to calculate the rectangle Area, where the length is L and the width is W :

Solution steps	Flowchart
End	
Print area	
Start	
Area = $L * W$	
Enter L, W	



*** First: Put (✓) for the true sentence and (x) for the wrong one:**

- (1) The effect of setting the **WindowState** property of the form appears only in runtime mode. ()
- (2) The **VB.net** language is one of the high level languages. ()
- (3) The property **Name** is used in showing a certain text the title bar of Form window. ()
- (4) **Framework.net** contains Compilers, libraries and environment of runtime for applications which are produced in VB.net language. ()
- (5) The rectangle symbol is used to represent the data input process. ()
- (6) The problem means that an objective or output is required to reach. ()

*** Second: Choose the appropriate answer to complete each of the following statements:**

- (1) The object **TextBox** is marked by one property:
(PasswordChare - Name - AutoSize)
- (2) Making sure that the program is free of errors – can be called:
(Program testing - Program documentation - Algorithm)
- (3) Click on Button is:
(Property - Procedure - Event)
- (4) The property, which is responsible for choosing the background color of the Button is:
(Text - ForeColor - BackColor)
- (5) The Control tool, which can be used on the Form to choose Gender of the student "male" or "female" is:
(TextBox - CheckBox - RadioButton)

*** Third: Type the scientific term for each of the following:**

- (1) A window through which we can write instructions and codes of the program.

- (2) It is the interface which the user deals with through different controls.
- (3) Schematic representations, which depend on drawing some standard symbols to clarify the order of procedures to solve a problem.
- (4) One of the control tools. When you click it, it does a certain task.

*** Fourth: A: Explain the following code:**

- (1) Button2. Text = "Arabic Republic of Egypt"
- (2) Label1. AutoSize = True

B: Complete a flowchart to print the word "successful" if the entered score is greater than or equal to 50 using the corresponding table:

Print "successful"	<pre> graph TD Start([Start]) --> 1[/1/] 1 --> 2{2} 2 -- Yes --> 3[/3/] 3 --> End([End]) 2 -- No --> End </pre>
Enter X	
X >= 50 Then	

ASWAN GOVERNORATE



2023

محافظة أسوان

16

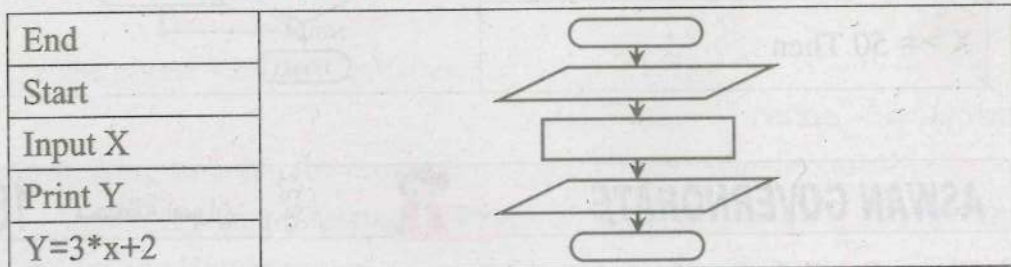
*** First: Put (✓) for the true sentence and (x) for the wrong one:**

- (1) Flowcharts use standard symbols and lines to represent a problem algorithm. ()
- (2) Documenting the program means making sure that the program is free of errors. ()
- (3) All programming languages, which carry out a group of commands and instructions are considered as Event Driven languages. ()
- (4) The VB.net language is used in producing Windows applications and Web applications. ()
- (5) The name, the size and color of an object are all samples of events that can occur to the object in VB.net language. ()

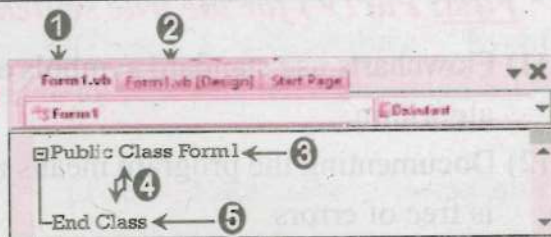
*** Second: Choose the correct answer among the alternatives:**

- (1) The steps, activities, and processes to be done to reach an output or objective, it is called:
 a) Problem Definition b) Problem c) Problem solving
- (2) A set of procedures arranged logically for solving a specific problem can be called:
 a) Problem b) Algorithm c) Program testing
- (3) Characteristics which describe the object such as size, name and color are called: a) Procedures b) Properties c) Events
- (4) The used property in showing a certain text on the title bar of a Form is:
 a) Text b) FormBorderStyle c) Name
- (5) The ListBox and ComboBox share in this property:
 a) SelectionMode b) Suggest c) Items

*** Third: Put the data in the right place on the flowchart to print the value of Y:**



*** Fourth: Complete the table with a number from (1) to (5), using the following screen, so that each number expresses what it refers to:**

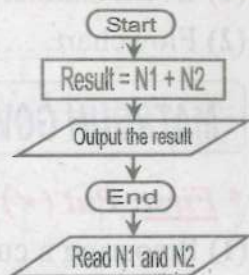


N.	Indicate
.....	The end of Class.
.....	The space to write the codes of the class.
.....	The name of the file that saves the design of the form interface.
.....	The name of the file that saves the code.
.....	The start of the class.



*** First: Answer the following questions:**

- The flowchart to calculate the sum of two numbers and display the result.



A: Redraw and rearrange the flowchart.

B: Mention the function of each of the following symbols:

- (1) (2)

*** Second: Put (✓) for the true sentence and (x) for the wrong one:**

- (1) Events indicate to features that describe the object. ()
- (2) The window for writing program commands and instructions is called the form window. ()
- (3) There are properties common, between the different controls such as Text. ()
- (4) The Font property is used to write the text that appears on the title bar of the form window. ()
- (5) The VB.net language is one of the high level languages. ()
- (6) The ComboBox control is used to select only one item from a list of items. ()

*** Third: A: Choose the appropriate answer to complete each of the following sentences:**

(Program documentation – Label – GroupBox – F7 – btncalculate)

- (1) is the tool used in contains a group of controls, these controls have the same function on the Form. -
- (2) Writing down all the steps taken to solve a problem errors – be called:
- (3) To open the code window, press key.
- (4) The value of the Name property of Button1 is

B: Write a definition for each of the following:

- (1) Event handler.
 (2) Flowchart.

MATROUH GOVERNORATE



2023

محافظة مطروح

18

*** First: Put (✓) for the true sentence and (x) for the wrong one:**

- (1) Preparing a cup of tea is an example of a problem. ()
 (2) Algorithm is a set of procedures arranged logically for solving a specific problem. ()
 (3) You can use any Geometric shape to represent Algorithm when drawing flowcharts. ()
 (4) The VB.net language is the only high level language. ()
 (5) The name, the size and color of an object are all samples of procedures that can occur to the object in VB.net language. ()
 (6) Placing Controls automatically on the Form on the co-ordinate (0-0) is in the middle of the Form. ()

*** Second: Choose the appropriate answer to complete each of the following statements:**

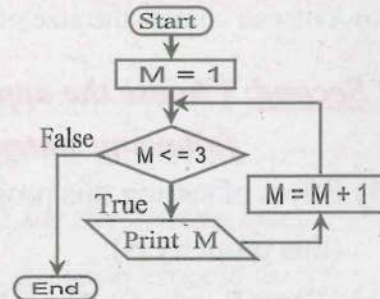
- (1) Writing down all the steps taken to solve a problem errors – can be called:
 a) Program documentation b) Program testing c) Flowcharts
- (2) Click on Button is:
 a) Property b) Procedure c) Event
- (3) The function of "Right to Left" property of the Form is:
 a) Define the direction of Control tools from right to left.
 b) Define the state of the window in a state of maximizing or minimalizing.
 c) Determine the case of the form window in a position enlarge or reduce.
- (4) The property which is responsible for the size, shape and effect of the Text font shown on the Button is
 a) BackColor b) ForeColor c) Font

(5) To choose the border style to the Label control, we use the property

- a) **BorderStyle** b) **AutoSize** c) **All of the previous**

* **Third: Answer the following:**

- (1) The number of iterations (print the value of M) is:
- (2) The value of M after the end of the iterative loop equals:
- (3) The value of M before start the iterative loop equals:



* **Fourth: Write the scientific term in front of each of the following statements using the following scientific terms:**

(Label - Event handler - compilers - TextBox - RadioButton)

- (1) is a procedure, which contains a code that is carried out when a corresponding event occurs.
- (2) compile commands and instructions written in programming language into machine code.
- (3) is a tool used to insert (input) data from the user during program run time.
- (4) is used to select one alternative only from a group of options.
- (5) is a tool used in showing a text on the Form Window which can't be changed during program runtime.



* **First: Put (✓) for the true sentence and (x) for the wrong one:**

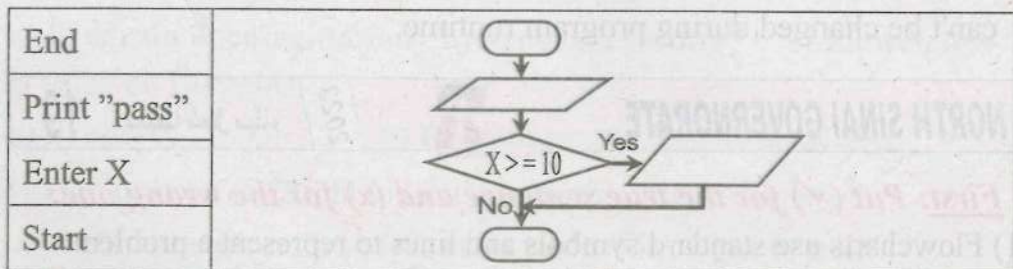
- (1) Flowcharts use standard symbols and lines to represent a problem algorithm. ()
- (2) Object properties can be set programmatically in VB.Net. ()
- (3) The VB.net language cannot be used in producing Windows applications. ()
- (4) The VB.net language is one of the high level languages. ()

- (5) The property "Name" is used in showing a certain text in the title bar of user window a name of the window. ()
- (6) You can change the size of Label manually if `AutoSize = False` ()

*** Second: Choose the appropriate answer to complete each of the following statements:**

- (1) Effect of setting this property doesn't appear unless in runtime mode (this property is):
 a) `FormBorderStyle` b) `WindowState` c) `RightToLeft`
- (2) The property which is responsible for the size, shape and effect of the text font shown on the Button is:
 a) `BackColor` b) `ForeColor` c) `Font`
- (3) We can enter the code window more than one-way, including pressing a key..... a) `F4` b) `F5` c) `F7`
- (4) The Control Tool that is used in containing a group of controls that have the same function on the Form is:
 a) `GroupBox` b) `ListBox` c) `ComboBox`

*** Third: Complete the flowchart using the following data, to print "Pass" if the score entered x is greater than or equal to 10:**



*** Fourth: A: Explain the following codes through your pervious study for the general syntax to adjust the properties of control programmatically:**

`Label1.AutoSize = True`

B: What are the stages of problem solving?



*** First: A: Type the name of the property or the tool that performs each of the following functions:**

- (1) is a tool used to input data from the user during program run time.
- (2) used to defining the height and width of the tool on the Form.

B: Put (✓) for the true sentence and (x) for the wrong one:

- (1) The symbol ☐ is used to represent a decision process in flowcharts. ()
- (2) Compilers are programmes that translate commands and instructions written by the programmer from the high level language into machine language. ()
- (3) **ListBox** control is the interface, which the user deals with through different controls. ()
- (4) The symbol ↓ is used to define the sequence in top-down flowcharts. ()
- (5) Flowcharts start with the start symbol and end with the end symbol. ()
- (6) **Button** is one of the control tools, can be inserted on the form. When you click it, it does a certain task. ()

*** Second: Complete with the appropriate word from the brackets:**

(Problem - RadioButton - Procedures - GroupBox -
Flowchart - Visual Basic.net)

- (1) The means that an objective or output is required to reach.
- (2) Commands and instructions which we want to carry out are called
- (3) Control tool which can be used on the Form to choose Gender of the student "male" or "femal " is
- (4) help to facilitate understanding of the problem, and convert it to a program.
- (5) language is the high level language; it is used to create apps.

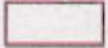
- (6) The Control Tool which is used in containing a group of controls that have the same function on the Form is

** Third: Choose the correct answer from the brackets:*

- (1) Making sure that the program is free of errors – can be called:
(Problem - Program testing - Algorithm)
- (2) contains tools of controls which can be put on the Form, that classified into categories.
(Code window - Toolbox- Properties window)
- (3) is a procedure containing a code that is carried out when a corresponding event occurs. (Event Handler - Class - AutoSize)
- (4) IDE is called (Click - Form - IDE)
- (5) The used property in showing a certain text on the title bar of a Form is:
(Name - Text - FormBorderStyle)
- (6) is a set of procedures arranged logically for solving a specific problem.
(Algorithm - Problem - Items)

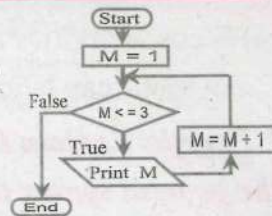


** First: A: Put (✓) for the true sentence and (x) for the wrong one:*

- (1) Flowcharts use standard symbols and lines to represent a problem algorithm. ()
- (2) Algorithm is a set of procedures arranged logically for solving a specific problem. ()
- (3) The VB.net language is the only high level language. ()
- (4) The Events are the commands and instructions, which are carried out when a certain procedure occurs to the object in VB.net language. ()
- (5) The function of the property **RightToLeft** of the Form is to define the direction of Controls from right to left. ()
- (6) The rectangle symbol  is used to represent the data input process. ()

B: The Corresponding flowchart:

- (1) The number of iterations (print the value of M) is:
 (2) The value of M after the end of the iterative loop equals:



*** Second: Choose the appropriate answer to complete each statement from the following:**

- (1) Making sure that the program is free of errors – can be called:
 a) Program testing b) Program documentation c) Algorithm
- (2) Problem-solving approach includes many of the terminologies, the terminology that expresses the mathematical problem is:
 a) Algorithm b) Problem c) Program design
- (3) The Properties term refers to:
 a) Features that describe the object.
 b) Events that can occur to the object.
 c) Commands and instructions that are carried out.
- (4) On setting some properties of the Form, they are applied on Control Tools, which are placed on the Form (one of them is):
 a) Name b) ForeColor c) Text
- (5) The property which is responsible for the size, shape and effect of the text font shown on the Button is:
 a) Backcolor b) Forecolor c) Font
- (6) The Control tool which can be used on the Form to choose Gender of the student "male" or "female" is:
 a) RadioButton b) CheckBox c) TextBox

*** Third: Complete the following using the following words:**

(VB.net - Problem Solving - PasswordChar - .Net Framework - Text)

- (1) Libraries, Compilers and Environment of runtime of applications are the most important components of:
 (2) The used property in showing a certain text on the title bar of a Form is:
 (3) The object TextBox is marked by one property:

- (4) Steps, activities and procedures to be done to reach an objective or an output - can be called:

*** Fourth:** Explain the following codes through your pervious study for the general syntax to adjust the properties of control programmatically:

- (1) Button2. Text = "End"
(2) Label1. AutoSize = True

PORT SAID GOVERNORATE



2023

محافظة بورسعيد

22

*** First:** Put (✓) for the true sentence and (x) for the wrong one:

- (1) The program documentation is writing down all the steps taken to solve a problem. ()
- (2) The VB.net language is the only high level language. ()
- (3) The problem means that an objective or output is required to reach. ()
- (4) You can change the size of Label manually if AutoSize = True. ()
- (5) Listbox is the control tool that allows the user to choose one element of several elements in the smallest possible space on the form window. ()
- (6) The property Text is used in showing a certain text the title bar of user window. ()

*** Second:** Choose the correct answer to complete the following sentences:

- (1) Click on Button is: (Property - Procedure - Event)
- (2) The effect of setting this property doesn't appear unless in runtime mode (this property is):
(RightToLeft - WindowState - FormBorderStyle)
- (3) The property which is responsible for the background color of the Form:
(ForeColor - Font - BackColor)
- (4) You can change the position of the Button on the Form through:
(The eight squares - Setting Size property - Setting Location property)

Answers of All Questions

- The Answer of Chapter One -

- Activity (1) -

First: Define the problem.

Outputs: Calculate the area and Perimeter of the rectangle.

Inputs: Values of the variables (L, W)

Solution equations:

Area = $L * W$, Perimeter = $2*(L+W)$

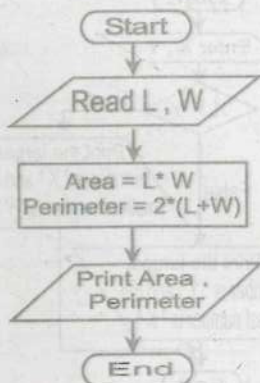
(1) Start

(2) Read the values of variables (L, W)

(3) Calculate Area = $L * W$ and,
Calculate Perimeter = $2*(L+W)$

(4) Print the Area and the Perimeter.

(5) End



- Activity (2) -

First: Define the problem.

Output: Calculate the Area

Input: Value of the variable (R).

Solution equation: Area = $3.14 * R * R$

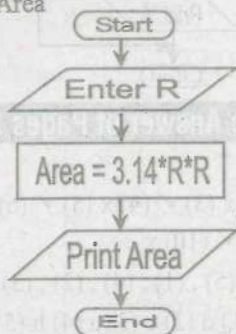
(1) Start

(2) Enter the value of variable (R).

(3) Calculate Area = $3.14 * R * R$

(4) Print the Area

(5) End



- Activity (3) -

First: Define the problem.

Output: Calculate the number of years.

Input: Value of the variable (NMonths)

Solution equation:

NYears = $NMonths / 12$

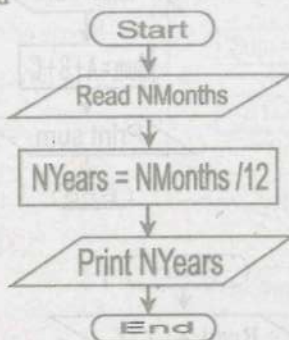
(1) Start

(2) Read the value of variable (NMonths)

(3) Calculate: NYears = $NMonths / 12$

(4) Print the NYears.

(5) End



- The Answer of Pages 11 : 14 -

First: (1) x (2) x (3) ✓ (4) ✓ (5) ✓ (6) x

(7) x (8) x (9) x (10) ✓ (11) x (12) ✓

(13) ✓ (14) x (15) x

Second: The algorithm:

(1) Start

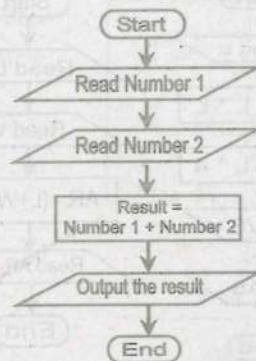
(2) Read the values of Number1

(3) Read the values of Number2

(4) Result = Number1 + Number2

(5) Output the Result.

(6) End



Third:

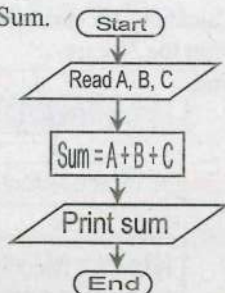
Input: The values of variables (a, b and c)

Output: Sum, Sum square and Numbers squares

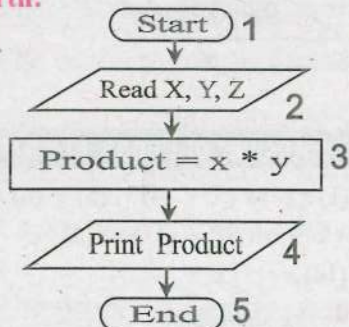
Solution equations:

Sum: $\text{Sum} = A + B + C$

- (1) Start
- (2) Read the values of A, B and C.
- (3) $\text{Sum} = A + B + C$
- (4) Print Value of Sum.
- (5) End

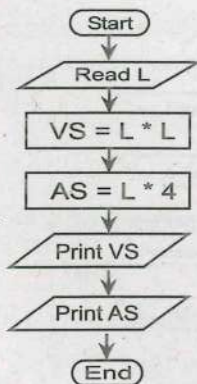


Fourth:

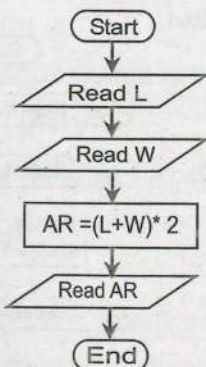


- The purpose of the algorithm is compute the average and Product of three numbers.

Fifth:



Sixth:



- Activity (4) -

First: Define the problem.

Output: Print size of the number.

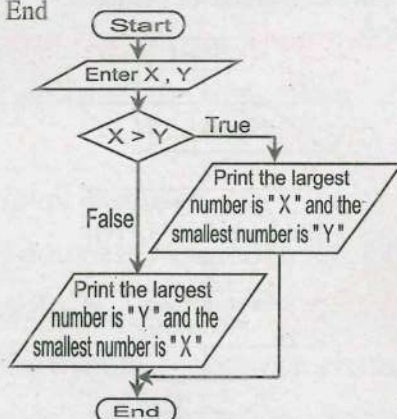
Input: Values of the variables (X and Y)

Solution equation: Is $X > Y$?

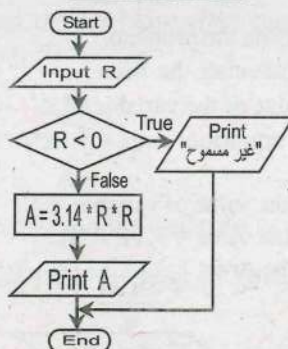
- (1) Start
- (2) Enter the values of variables (X, Y)
- (3) If X is Bigger than Y Then
- (4) Print the largest number is "X" and the smallest number is "Y".

Else:

- (5) Print the largest number is "Y" and the smallest number is "X".
- (6) End



- Activity (5) -



- The Answer of Pages 22 : 23 -

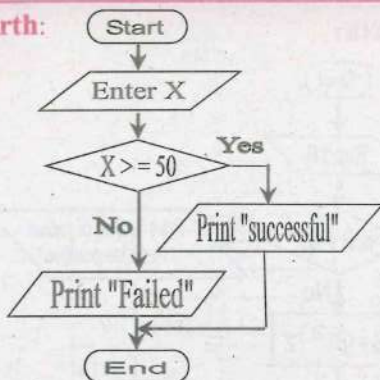
First:

- (1) ✓ (2) x (3) ✓ (4) x (5) ✓ (6) x (7) x
(8) ✓ (9) ✓ (10) x

Second: (5), (1), (4), (2), (3)

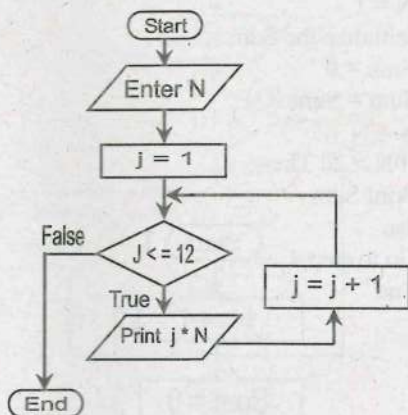
Third: (1) d (2) e (3) a (4) b (5) c

Fourth:

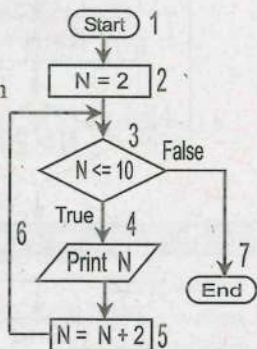
**- Activity (6) -**

- Value of the variable (j) after the end of the iteration (13).

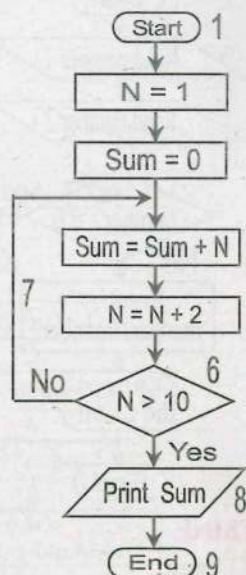
- Printed values are: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36.

**- Activity (7) -**

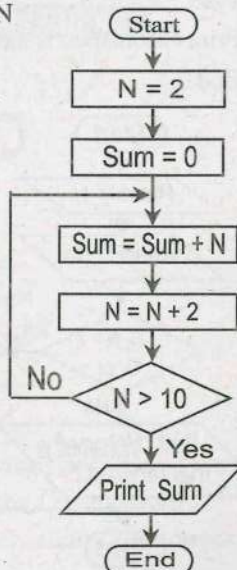
- (1) Start
- (2) Initialize the N
N = 2
- (3) If N <= 10 Then
- (4) Print N
- (5) N = N + 2
- (6) Go to step 4
- Else
- (7) End

**- Activity (8) -**

- (1) Start
- (2) Initialize the N, N = 1
- (3) Initialize the Sum
Sum = 0
- (4) Sum = Sum + N
- (5) N = N + 2
- (6) If N > 10 Then
Go to step 8
Else
- (7) Go to step 4
- (8) Print Sum
- (9) End

**- Activity (9) -**

- (1) Start
- (2) Initialize the N, N = 2
- (3) Initialize the Sum, Sum = 0
- (4) Sum = Sum + N
- (5) N = N + 2
- (6) If N > 10 Then
Go to step 8
Else
- (7) Go to step 4
- (8) Print Sum
- (9) End

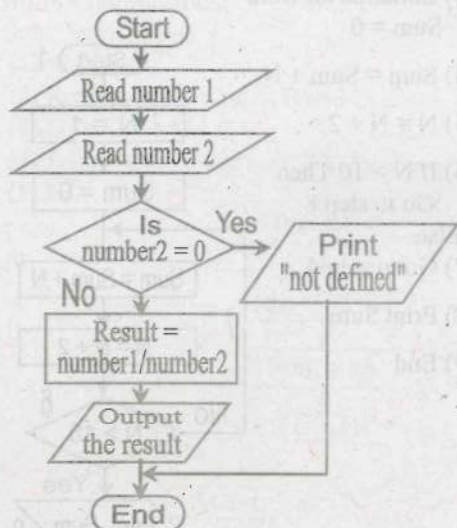


- The Answer of Pages 31 : 33 -

First:

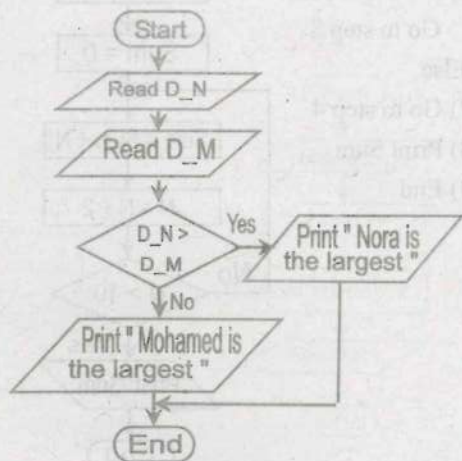
(1) x (2) x (3) ✓ (4) ✓ (5) x

Second:

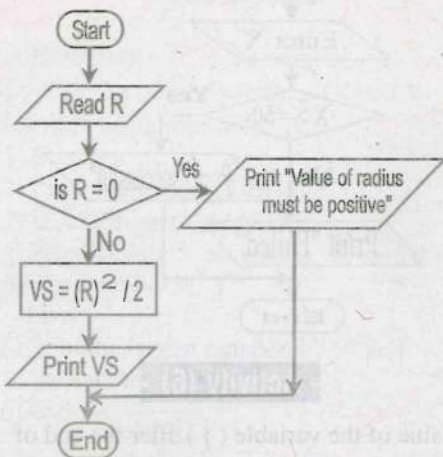


Third:

- (1) Start .
- (2) Read the value of variable (D_N)
- (3) Read the value of variable (D_M)
- (4) If D_N > D_M Then
- (5) Print "Nora is the largest"
- Else
- (6) Print "Mohamed is the largest"
- (7) End

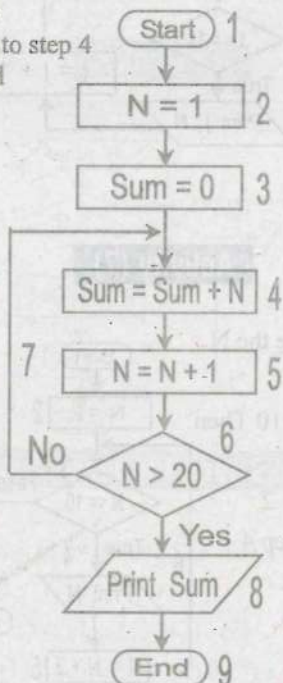


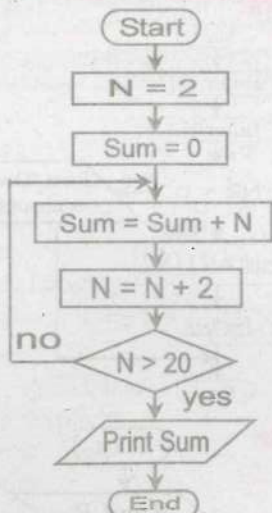
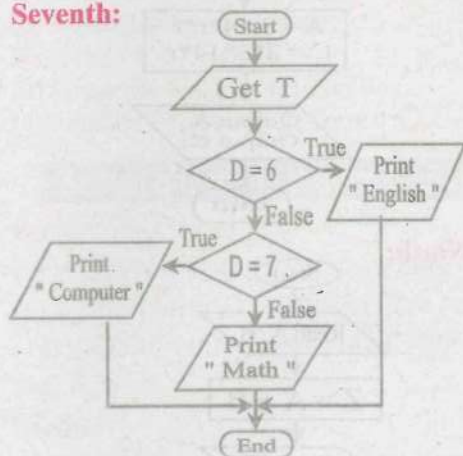
Fourth:



Fifth:

- (1) Start
- (2) Initialize the N
N = 1
- (3) Initialize the Sum
Sum = 0
- (4) Sum = Sum + N
- (5) N = N + 1
- (6) If N > 20 Then
- (8) Print Sum
- Else
- (7) Go to step 4
- (9) End



Sixth:**Seventh:****School questions (page 34:36)**

First: (1) ✓ (2) x (3) ✓ (4) x (5) ✓ (6) ✓ (7) ✓ (8) ✓ (9) x (10) x (11) x (12) ✓ (13) ✓ (14) ✓ (15) ✓ (16) ✓

Second:

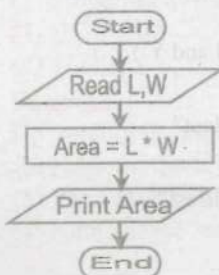
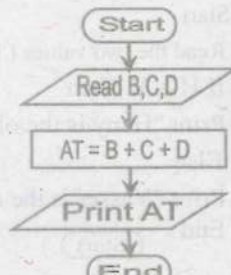
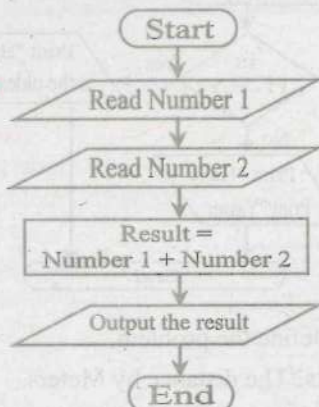
(1) c (2) a (3) b (4) a (5) a (6) b (7) a (8) c (9) b (10) c

General questions (page 36:37)

First: (1) decision (2) Flowchart (3) Algorithm (4) Variable (5) Flowchart (6) Terminal (7) A problem

Second:

(1) x (2) x (3) x (4) ✓ (5) x (6) ✓ (7) ✓

Third:**Fourth:****Fifth:****Questions of the governors exams (38:40)****First:**

(1) ✓ (2) x (3) x (4) x (5) ✓

Second: (1) (2)

(3) Flowchart

(4) Terminal (5) Decision **Third:**

- (1) Define the problem.
- (2) Prepare the solving steps (Algorithm)
- (3) Design the program on computer.
- (4) Test the program validity and correct errors.

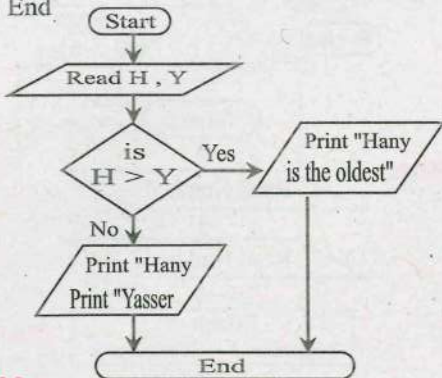
(5) Program documentation.

Fourth:

First: Define the problem.

Inputs: Values of the variables (H, Y)

- (1) Start
- (2) Read the two values (H and Y)
- (3) If $H > Y$ Then
- (4) Print "Hany is the oldest"
- Else
- (5) Print "Yasser is the oldest"
- (6) End



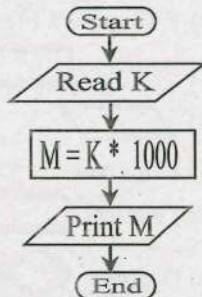
Fifth:

First: Define the problem.

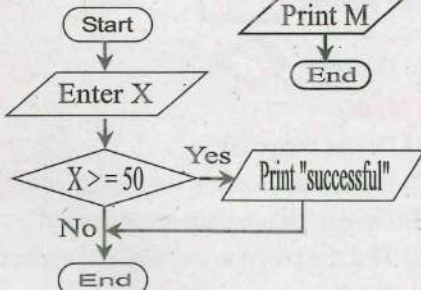
Outputs: The distance by Meters.

Inputs: Value of the variables (K).

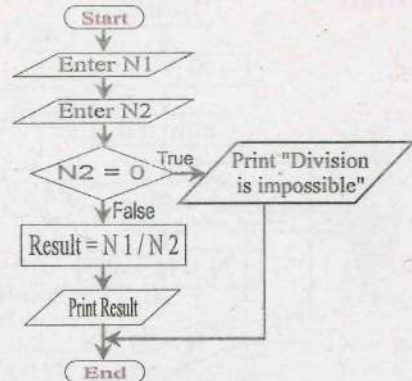
- (1) Start
- (2) Read the value (K)
- (3) Calculate Distance by Meters.
- (4) Print M
- (5) End



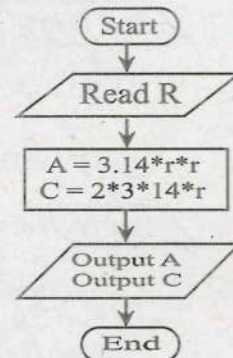
Sixth:



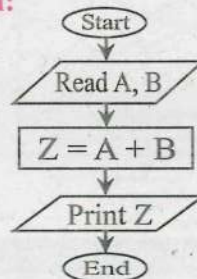
Seventh:



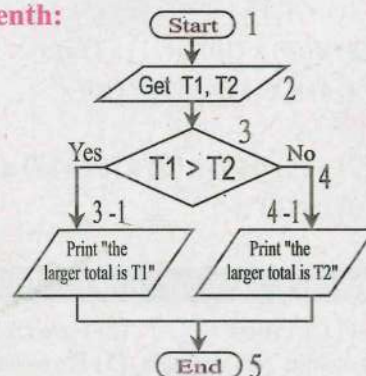
Eighth:



Ninth:



Tenth:



- The Answer of Chapter Two -**- The Answer (page 50) -****First:** (1) ✓

(2) ✓ (3) ✓ (4) x (5) x (6) ✓ (7) x (8) x

Second: (1) Form

(2) Properties window

(3) ToolBox

(4) Machine Language

(5) Event driven language

Third:

(1) IDE (2) Object

(3) Solution Explorer

(4) Windows – Web – Mobile

(5) Properties

(6) Machine Language

(7) ToolBox

(8) Object Oriented language

Fourth:

(3) Properties window (2) ToolBox

(4) Solution Explorer (1) Form

- School questions (Pages 52:54) -**First:**

(1) ✓ (2) ✓ (3) x (4) ✓ (5) ✓ (6) x (7) x

(8) ✓ (9) x (10) x (11) ✓ (12) x (13) x

(14) ✓ (15) ✓ (16) x (17) ✓ (18) ✓ (19) x

(20) ✓

Second:

(1) c (2) b (3) a (4) c (5) b (6) a (7) b (8) c

(9) c (10) b

- General questions (Page 55) -**First:** (1) ✓

(2) x (3) x (4) x (5) ✓ (6) x (7) x (8) ✓

Second:

(1) IDE (2) problem

(3) Documentation (4) Flowcharts

(5) Algorithm (6) English

- Governorates Exams (Page 56) -**First:**

(1) ✓ (2) x (3) ✓ (4) x (5) x (6) x (7) ✓

(8) ✓ (9) ✓

Second:

(1) c (2) a (3) b (4) a (5) c (6) b

Third:

(1) Solution Explorer

(2) Properties Window

(3) The Form

(4) ToolBox

Fourth:

(1) Solution Name.

(2) Name of the first project.

(3) The first project files and folders.

(4) Name of the second project.

- General test (1) page 61 -**First:**

(1) ✓ (2) x (3) x (4) ✓ (5) ✓

Second:

(1) Rectangle

(2) Problem Definition

(3) Inputs

(4) Flowchart

(5) Algorithm

Third:**Fourth:**

(1) Algorithm

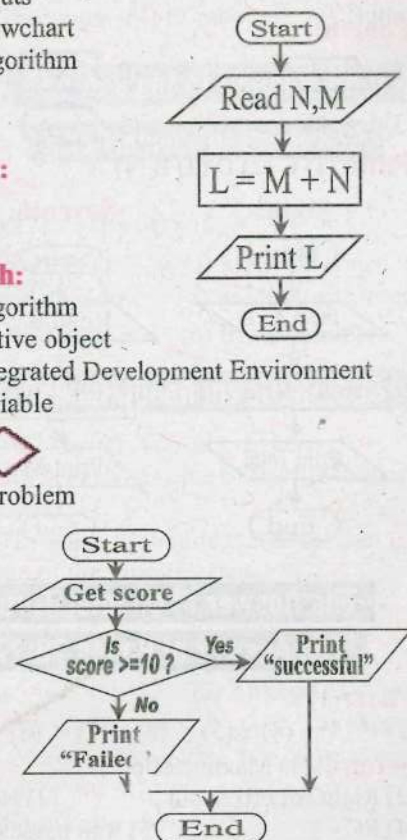
(2) Active object

(3) Integrated Development Environment

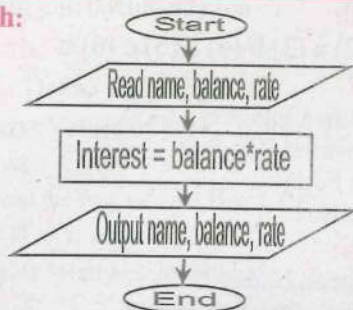
(4) variable

(5) 

(6) a problem

Fifth:

Sixth:



- General test (2) page 63 -

First: (1) Decision

(2) Problem Solving

(3) Flowchart (4) ToolBox

Second:

(1) Solution Explorer

(2) Form (3) All of the above

(4) Visual Studio.Net

(5) second (6) Flowchart

Third: (1) x (2) x (3) ✓ (4) x (5) ✓ (6) ✓

Fourth:

(1)

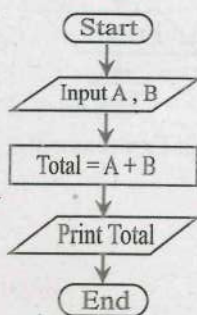
(2)

(3) Events

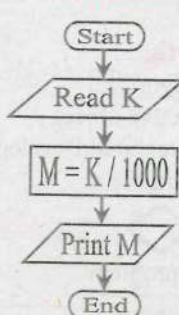
(4)

Fifth: (1) C (2) D (3) B (4) A

Sixth:



Seventh:



- The Answer of Chapter Three -

- The Answer of Pages 76:77 -

First: (1) x

(2) ✓ (3) x (4) x (5) ✓ (6) x (7) ✓ (8) ✓

Second: (1) MaximizeBox

(2) RightToLeftLayout (3) None

(4) F5

(5) Run mode only

(6) Name

(7) IDE

Third: (2), (4), (1), (3)

Fourth:

(1) Properties - Values

(2) BackColor (3) WindowState (4) Text (5)

ControlBox (6) frmSquare

- The Answer of Pages 84:85 -

First:

(1) D (2) E (3) A (4) B (5) C

Second:

(1) b (2) a (3) c (4) a (5) c (6) b

Third:

(1) x (2) ✓ (3) x (4) ✓ (5) x (6) x (7) ✓

(8) ✓ (9) x (10) x

Fourth:

(1) Name (2) ForeColor (3) F1 (4) Form

- The Answer of Pages 92:93 *

First:

(1) ✓ (2) x (3) x (4) x (5) x (6) ✓ (7) x

Second: (1) E (2) D (3) A (4) B (5) C

Third: (1) TextBox

(2) ForeColor

(3) Label

(4) Name

(5) height is 60 - width is 184

(6) Font

(7) MultiLine

Fourth: (1) PasswordChar (2) multi line

(3) True or false

(4) TextBox

(5) MaxLength

Fifth: (1) Label

(2) TextBox

(3) Button

(4) Form window

- The Answer of Page 100 -

First: (1) Location

(2) Size

(3) BorderStyle

(4) Items

Second: (1) ✓ (2) x (3) x (4) x

- The Answer of Page 108 *

First: (1) D (2) F (3) B (4) A (5) C (6) E

Second: (1) GroupBox

(2) BackColor

(3) RadioButton

(4) ForeColor

(5) CheckBox

Third: (1) CheckBox

(2) All of the previous

(3) RadioButton

- (4) Sorted (5) SelectionMod

Fourth: (1) ✓ (2) x (3) ✓ (4) ✓ (5) x

- School questions of Page 110 -

First:

- (1) ✓ (2) x (3) x (4) x (5) ✓ (6) ✓ (7) ✓ (8) x
(9) ✓ (10) x (11) x (12) ✓ (13) ✓ (14) x (15) ✓
(16) x (17) ✓ (18) x (19) x (20) ✓

Second:

- (1) a (2) c (3) b (4) b (5) b (6) c (7) b (8) a
(9) a (10) c (11) a (12) a (13) c (14) c
(15) b (16) c (17) a (18) c (19) c (20) a

- General questions of Page 114 -

First: (1) D (2) C (3) E (4) B (5) A

Second: (1) MaxLength (2) Button
(3) All of the previous (4) Font
(5) False (6) True or False

Third:

- (1) x (2) ✓ (3) x (4) ✓ (5) x (6) ✓ (7) x

Fourth: (1) Label control (2) TextBox
(3) GroupBox (4) RadioButton
(5) ComboBox (6) Button

Fifth: (1) Items (2) WindowState (3) Text
(4) Backcolor (5) BorerStyle

(6) Name (7) PasswordChar (8) Button

Sixth: (1) TextBox (2) A comboBox
(3) A label (4) ListBox
(5) Button (6) A RadioButton

- Governorates exams (Page 117) -

First: (1) x (2) x (3) ✓ (4) ✓ (5) x
(6) x (7) x (8) ✓

Second: (1) SelectionMode
(2) Properties and Code window
(3) Name (4) view (5) PasswordChar
(6) Sorted

Third: (1) ListBox (2) ComboBox
(3) TextBox (4) RadioButton

Fourth:

- (1) G (2) C (3) E (4) A (5) B (6) D

Fifth:

- (1) IDE (2) F5 (3) ForeColor
(4) Textbox

- General test (3) page 121 -

First: (1) Name (2) all of the above

(3) ForeColor (4) F5 (5) Text

Second: (1) E (2) A (3) F (4) C (5) D (6) B

Third:

- (1) Machine language (2) Toolbox
(3) Properties window

Fourth: (1) ✓ (2) ✓ (3) x (4) x (5) x

Fifth: (1) Label (2) Radiobutton
(3) Checkbox (4) Groupbox (5) Textbox
(6) Listbox (7) Combobox (8) Button

- General test (4) page 123 -

First: (1) x (2) ✓ (3) ✓ (4) x (5) ✓ (6) ✓

Second: (1) BorderStyle
(2) AutoCompleteSource (3) BackColor
(4) ControlBox (5) Properties Window
(6) None of the above

Third: (1) D (2) E (3) B (4) A (5) C

Fourth: (1) Label (2) Textbox
(3) Checkbox (4) Combobox (5) Button

- The Answer of Chapter Four -

- The Answer of Page 132 -

First:

- (1) x (2) x (3) x (4) x (5) ✓

Second: (1) F7 (2) Method Names
(3) code window (4) Solution Explorer
(5) Class Names (6) Event Handler

- School questions (Page 133) -

First: (5), (4), (2), (1), (3)

Second: (1) The name of the file that saves the code.

(2) The name of the file that saves the design of the form interface.

(3) The declaration of Class; its name is (Form1).

(4) The space to write the codes of the class. (5) The end of Class

Third: (1) Shapes (2) Shapes

(3) - View Code - of the File (Form1.vb)

- F7

(4) Form1.vb

Fourth:

- (1) A drop-down menu of (Class name)
- (2) The start of the class, its name
frmSquare.
- (3) A drop-down menu of (Method name)

Fifth:

- (1) A drop-down menu of (Method name)
- (2) A drop-down menu of (Class Name).
- (3) Button1 - Label1 - TextBox1
- (4) frmSquare

Sixth: (1) AutoSizeChange -

CausesValidationChanged - Click

- (2) name of the class
- (3) Button1
- (4) frmSquare.vb, and drop-down menu of (Method name)

Seventh:

- (1) The procedure name composed of (object name, event name).
- (2) End of procedure line.
- (3) What causes the call of the procedure (event occurrence).
- (4) Between the two lines shown; the code that will be executed on calling the procedure is written after the occurrence of the (Event).
- (5) The declaration of Class; its name (frmSquare).
- (6) The end of (class) line.

Eighth: (1) Object name or control name.

- (2) Proper name.
- (3) Value of the property

Ninth: (1) show the word ("End") on the face of the button.

- (2) The control size is automatically adjusted to fit the text displayed on the label.

- General questions (Page 137) -

First: (1) x (2) ✓ (3) x (4) ✓ (5) ✓ (6) ✓ (7) x (8) x

Second: (1) Code Window (2) Button1
(3) value (4) Event Handler (5) F7
(6) Control Name. Property = Value

Third:

- (1) A drop-down menu of (Class Name).
- (2) A drop-down menu of (Method Name)
- (3) The place of typing codes.

Fourth:

- (1) a (2) c (3) b (4) d (5) c

Fifth:

- (1) Name of the file where codes are saved.
- (2) Name of the file where form window is saved.
- (3) The declaration of Class; its name is (Form1).

- Governorates exams (page 139) -

First: [a]

- (1) Label1.AutoSize = False
- (2) Button1.Text = "Egypt"

[b]

- (1) Event Handler (2) Code window
- (3) Class Name (4) Method Name

Second:

- (1) c (2) a (3) c (4) a (5) d (6) b (7) d (8) b

Third:

- (1) ✓ (2) x (3) ✓ (4) x (5) x (6) ✓

Fourth:

- (1) Class Name (2) ListBox
- (3) CheckBox (4) form1
- (5) TextBox (6) End Sub

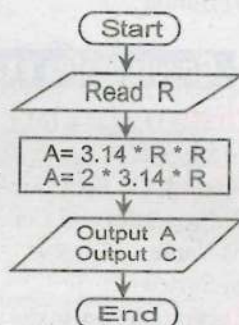
- General test (5) page 143 -

First: (1) x (2) x (3) ✓ (4) ✓ (5) x (6) x
(7) ✓ (8) x

Second: (1) E (2) C (3) D (4) B (5) A

Third:

- (1) Property
- (2) All of the above
- (3) Fixed Single
- (4) F7
- (5) FormBorderStyle
- (6) Tool box



Fourth:

- General test (6) page 145 -

First: (1) Visual Basic.N

- (2) .Net Framework
- (3) Form (4) categories
- (5) Solution Explorer (6) WindowState

Second: (1) ✓ (2) x (3) ✓ (4) ✓ (5) x

Third: (1) B (2) D (3) A (4) E (5) C

Fourth: (A) (3), (5), (1), (2), (6), (4)

(B) (1) The Class Name menu.

(2) The Method Name menu.

(3) The declaration of Class; its name frmSquare. (4) The procedure name.

(5) Between the two lines, the place of write the code. (6) The end of the Class; its name is frmSquare.

Fifth:



- Answer of the Sample Tests -

- [1] محافظة الغربية -

First: (1) Items (2) Text
(3) .Net Framework (4) Event Handler
(5) Visual Studio (6) Class name

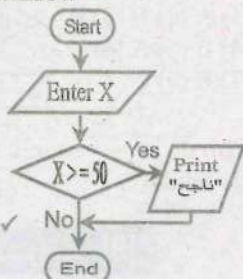
Second: (1) Form window

(2) TextBox
(3) CheckBox
(4) RadioButton
(5) Font
(6) ToolBox

Third: A):

(1) x (2) ✓ (3) x (4) ✓

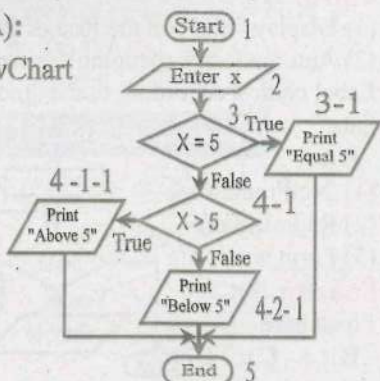
B): FlowChart



- [2] محافظة المنوفية -

First: A):

(1) FlowChart



(2) The purpose of the Flowchart is, to print an X value equal to 5, less than 5, or greater than 5.

(3) Step No. 3 has not been implemented and will move to Step No. 4.

(4) Move to step 4-2-1 (print less than 5)

B):

(1) ListBox2. Sorted = True

(2) TextBox5. Maxlength = 10

Second: A): (1) ✓ (2) ✓ (3) x (4) ✓ (5) x

B): (1) Output (2) Objects (3) Event

(4) Instructions (5) AutoSize

Third: A):

(1) Common Controls

(2) Algorithm

(3) Problem definition

B):

(1) The property (FormBorderStyle) = Non

(2) The property (Items), Runtime mode

(3) AutoCompleteMode = Suggest,
AutoCompleteSource = ListItems

(4) The property (Checked)

(5) GroupBox tool to divides the
RadioButton tools into two groups.

- [3] محافظة الدقهلية -

First: A):

(1) C (2) B (3) B (4) A (5) B (6) A

B): It is a diagram that uses standard graphical symbols; to illustrate the sequence of steps required for solving a problem or specific question.

- Some advantages of flowcharts:

1) Useful to explain the program to others.

2) Helping in documenting the program in better manner, especially if the program is complicated.

Second: A):

(1) ✓ (2) x (3) ✓ (4) ✓ (5) x (6) x

B):

(1) SelectionMode (2) RadioButton

(3) Program documentation

Third: A):

(1) Code window

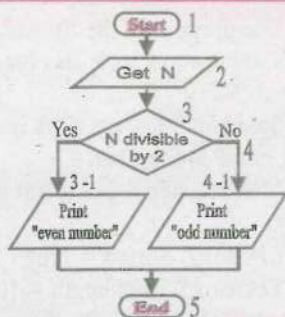
(2) Button1.ForeColor = Color.Red

(3) Name (4) ListBox1.items = sorted

(5) Label3.Text = "Get Green"

B):

FlowChart:



- [4] محافظة كفر الشيخ -

First: (1) ✓ (2) x (3) ✓ (4) ✓ (5) x

Second: (1) Event handler

(2) RadioButton (3) CheckBox

(4) Label (5) Event

Third: (1) F7

(2) Properties

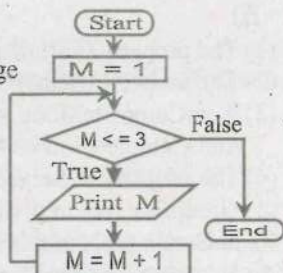
(3) VB.net language

(4) GroupBox

(5) Font

Fourth:

Flowchart



- [5] محافظة البحيرة -

First: (1) x (2) ✓ (3) ✓ (4) ✓ (5) x (6) x

Second: (1) Algorithm (2) Event

(3) Location (4) PasswordChare

(5) Form1.Vb (6) End Class

Third: (1) GroupBox

(2) Program documentation

(3) Properties (4) Class Name

Third: (1) 2 (2) 8, 14 (3) 6

- [6] محافظة دمياط -

First: (1) x (2) ✓ (3) ✓ (4) ✓ (5) x

Second: (1) Program testing

(2) Problem solving (3) Properties

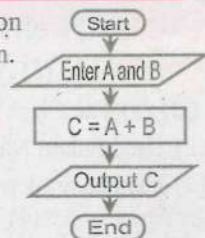
(4) Font (5) PasswordChar

Third: (1) Algorithm (2) Items

(3) ComboBox (4) False (5) F7

Fourth: A): Event Handler is a procedure which contains a code that is carried out when the associated event occurs.

B): To display "End" on the face of the button.



C): FlowChart:

- [7] محافظة الاسكندرية -

First:

(1) x (2) x (3) ✓ (4) ✓ (5) ✓ (6) x (7) ✓

Second: (1) Button (2) End Sub

(3) Compilers (4) Algorithm (5) Checked

Third: (1) properties

(2) F7 (3) Problem definition

(4) Sorted (5) MaximizeBox

Fourth: (1) $M \leq 6$ (2) Print M (3) 2

- [8] محافظة القاهرة -

First: (1) ✓ (2) ✓

(3) ✓ (4) x (5) x

(6) x (7) ✓ (8) ✓

Second:

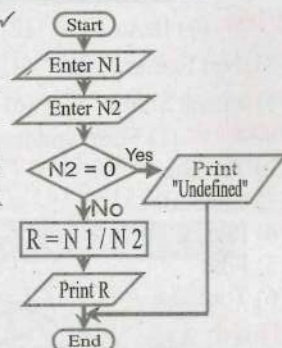
(1) A (2) B (3) B

(4) B (5) A (6) A

(7) B (8) C

Third:

Flowchart



- [9] محافظة الشرقية -

First: (1) x (2) ✓ (3) x (4) x (5) x

Second: (1) B (2) B (3) C (4) B (5) C

Third: A):

(1) Display "End" on the face of Button2

(2) Automatically changing the size of the Label control according to the amount of data.

B):

(1) .NetFramework

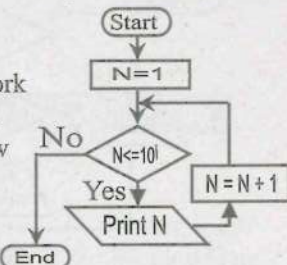
(2) RadioButton

(3) Form window

Fourth: A):

Flowchart:

B): 5 C): 11



- [10] محافظة القليوبية -

First: (1) Properties

- (2) GroupBox (3) Problem
(4) RadioButton (5) Problem Definition

Second: (1) A problem solving

- (2) Solution Explorer (3) Label
(4) Code window (5) Algorithm

Third: A): (1) B (2) C (3) A**B):** (1) The WindowState property of the Form window is set to Maximixed.

(2) The MaxLength property of TextBox1 is set to 8.

Fourth:**A):** Counter = 3 , A = 40 , B = 54**B):** (1) Button1 tool

(2) Text property of the Form1

- [11] محافظة الجيزة -

First: (1) ComboBox

- (2) Framework
(3) Solution Explorer
(4) Code window
(5) Algorithm

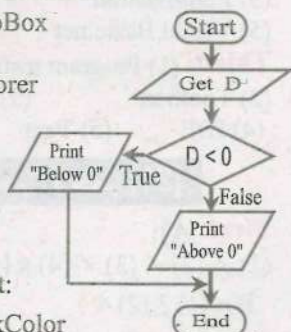
Second:

- (1) x (2) x
(3) ✓ (4) ✓ (5) x

Third: Flowchart:**Fourth:** (1) BackColor

(2) Display "End" on the face of the Button5.

(3) GroupBox (4) ControlBox



- [12] محافظة الفيوم -

First: (1) ✓ (2) ✓ (3) ✓ (4) ✓ (5) ✓ (6) x**Second:** (1) B (2) A (3) C (4) A (5) C (6) A**Third:** (1) B (2) C**Fourth:** (1) ToolBox (2) Flow line

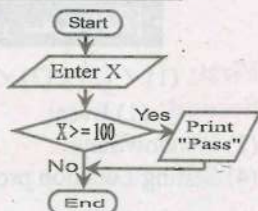
- [13] محافظة أسيوط -

First: (1) ✓ (2) x

- (3) x (4) ✓ (5) ✓

Second:

Flowchart:

**Third:**

- (1) Problem (2) Class name
(3) WindowState
(4) Solution Explorer
(5) Event Oriented

Fourth: (1) CheckBox

- (2) .Net Framework (3) AutoSize
(4) Properties (5) IDE

- [14] محافظة المنيا -

First: (1) ✓ (2) ✓ (3) x (4) x (5) ✓**Second:** (1) A (2) C (3) B (4) C (5) A**Third:** A):

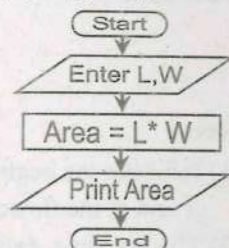
- (1) Control Name
(2) Property
(3) Value

B): (1) Print

(2) FlowChart

Fourth:

FlowChart



- [15] محافظة بنى سويف -

First: (1) ✓ (2) ✓ (3) x (4) ✓ (5) x (6) ✓**Second:** (1) PasswordChare

- (2) Program testing (3) Event
(4) BackColor (5) RadioButton

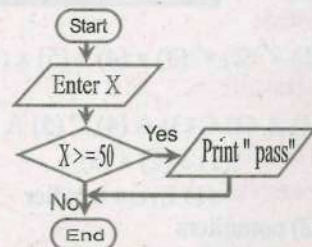
Third:

- (1) Code window (2) Form window
(3) FlowChart (4) Button

Fourth: A):

(1) Display the "Republic of Egypt Arabic" on the face of Button2.

(2) Makes Label1 tool size change automatically according to the amount of data inside it.

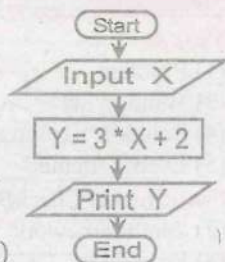
**B):**

Flowchart:

- [16] محافظة أسوان -

First: (1) ✓ (2) x (3) x (4) ✓ (5) x**Second:** (1) A (2) B (3) B (4) A (5) C

Third: FlowChart



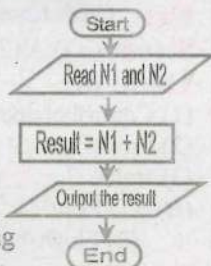
Fourth:

(3) (1) (2) (4) (5)

- محافظة الأقصر [17] -

First: A):

FlowChart



B):

- (1) Indicates the beginning or end of the flowchart.
- (2) The flow line, defines the flow of operations.

Second: (1) x (2) x (3) ✓ (4) x (5) ✓

Third: A): (1) GroupBox

- (2) Program documentation
- (3) F7
- (4) btnCalculate

B): (1) A procedure which contains a code that is carried out when the associated event occurs.

(2) It is a diagram that uses standard graphical symbols; to illustrate the sequence of steps required for solving a problem or specific question.

- محافظة مطروح [18] -

First:

(1) ✓ (2) ✓ (3) x (4) x (5) x (6) x

Second:

(1) A (2) C (3) A (4) C (5) A

Third: (1) 3 (2) 4 (3) 1

Fourth: (1) Event handler

- (2) compilers
- (3) TextBox
- (4) RadioButton
- (5) Label

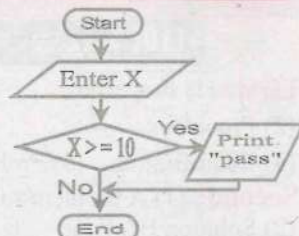
- محافظة شمال سيناء [19] -

First: (1) ✓ (2) ✓ (3) x (4) ✓ (5) x (6) ✓

Second: (1) B (2) C (3) C (4) A

Third:

FlowChart



Fourth: A):

Automatically setting the size of the Label tool according to the data it contains.

B): (1) Problem Definition.

(2) Algorithm preparation.

(3) Program design. (4) Program testing.

(5) Program Documentation.

- محافظة جنوب سيناء [20] -

First: A): (1) TextBox (2) Size

B): (1) x (2) ✓ (3) x (4) ✓ (5) ✓ (6) ✓

Second: (1) Problem (2) Procedures

(3) RadioButton

(4) Flowchart

(5) Visual Basic.net

(6) GroupBox

Third: (1) Program testing

(2) Toolbox

(3) Event Handler

(4) IDE

(5) Text (6) Algorithm

- محافظة البحر الأحمر [21] -

First: A):

(1) ✓ (2) ✓ (3) ✓ (4) x (5) ✓ (6) x

B): (1) 3 (2) 4

Second:

(1) A (2) A (3) C (4) B (5) C (6) A

Third: (1) .Net Framework (2) Text

(3) PasswordChar (4) Problem Solving

Fourth:

(1) Show the word "End" on the face of Button2.

(2) Automatically setting the size of the "Label Control" according to the amount of data in it.

- محافظة بور سعيد [22] -

First: (1) ✓ (2) x (3) ✓ (4) x (5) x (6) ✓

Second: (1) Event

(2) WindowState

(3) BackColor

(4) Setting Location property

With best wishes Al-Faez

حمل الآن

مجاناً وحصرياً

المراجعة رقم (3)

الترم الاول



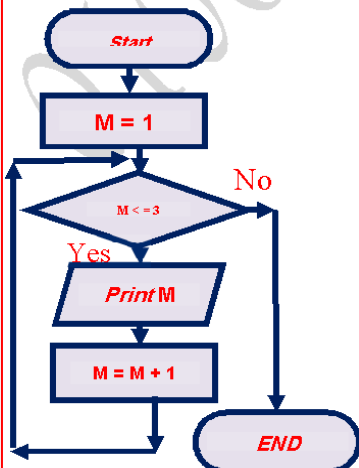
Chapter 1 Questions

First: Put (✓) in front of the correct sentence and (X) in front of the wrong one:

- () ١) خرائط التدفق تستخدم أشكال قياسية وخطوط لتمثيل خطوات حل مشكلة ما.
- 1) Flowcharts use standard symbols and lines to represent a problem algorithm. ()
- () ٢) يمكن استخدام أي شكل هندسي لتمثيل خطوات الحل عند رسم خريطة التدفق.
- 2) You can use any Geometric shape to represent Algorithm when drawing flowcharts. ()
- () ٣) يستخدم الرمز  للتعبير عن البداية والنهاية في خريطة التدفق.
- 3) The symbol  is used to represent start and end of flowchart. ()
- () ٤) يستخدم رمز المستطيل  ليعبر عن عملية إدخال بيانات.
- 4) The rectangle  symbol is used to represent the data input operation. ()
- () ٥) يستخدم الشكل  لتمثيل عملية اتخاذ القرار في خرائط التدفق.
- 5) The symbol  is used to represent a decision process in flowcharts. ()
- () ٦) المشكلة تعني هدف أو ناتج مطلوب الوصول إليه.
- 6) The problem means that an objective or output is required to reach. ()
- () ٧) إعداد كوب من الشاي يعتبر مثالاً لمشكلة.
- 7) Preparing a cup of tea is an example of a problem. ()
- () ٨) حل المشكلة عبارة عن الخطوات والأنشطة والعمليات التي ينبغي القيام بها للوصول إلى هدف أو ناتج.
- 8) Problem solving is the steps, activities, and processes to be done to reach an output or objective. ()
- () ٩) توثيق البرنامج عبارة عن مع مجموعة من الاجراءات المرتبة ترتيباً منطقياً لحل مشكلة معينة.
- 9) The program documentation is a set of procedures arranged logically for solving a specific problem. ()
- () ١٠) اختبار صحة البرنامج عبارة عن كتابة كل الخطوات التي اتخذت لحل مشكلة ما.
- 10) The program testing is writing down all the steps taken to solve a problem. ()
- () ١١) توثيق البرنامج يعني التأكد من خلو البرنامج من الأخطاء.
- 11) Documenting the program means making sure that the program is free of errors. ()
- () ١٢) الخوارزمية Algorithm عبارة عن مجموعة الاجراءات المرتبة ترتيباً منطقياً لحل مشكلة معينة.
- 12) Algorithm is a set of procedures arranged logically for solving a specific problem. ()
- () ١٣) توثيق البرنامج عبارة عن كتابة كل الخطوات التي اتخذت لحل مشكلة ما.
- 13) The program documentation is writing down all the steps taken to solve a problem. ()
- () ١٤) اختبار صحة البرنامج يعني التأكد من خلو البرنامج من الأخطاء.
- 14) Testing the program means making sure that the program is free of errors. ()
- () ١٥) خرائط التدفق هي تمثيل تخطيطي يعتمد على رسم بعض الأشكال القياسية لتوضيح ترتيب عمليات حل مشكلة.
- 15) Flowcharts are diagram representations which depend on drawing some standard symbols to clarify the order of procedures to solve a problem. ()
- () ١٦) تساعد خرائط التدفق على سهولة فهم المشكلة وتحليلها وتحويلها إلى برنامج.
- 16) Flowcharts help to facilitate understanding of the problem, analyse and convert it to a program. ()

Second: Choose the appropriate answer to complete each phrase of the following:

- ١- الخطوات والانشطة والعمليات التي ينبغي القيام بها للوصول إلى هدف أو ناتج يطلق عليها:
 أ- تحديد المشكلة. ب- المشكلة. ج- حل المشكلة.
 1 -Steps, activities and procedures to be done to reach an objective or an output - can be called:
 a. problem definition b. problem c. problem solving
- ٢- عند رسم خرائط التدفق نستخدم:
 أ- أشكالاً قياسية وخطوط. ب- جميع الرموز الهندسية. ج- شكل هندسي واحد.
 2 -On drawing flowcharts we use:
 a. standard symbols and lines b. all geometric figures c. one geometric figure
- ٣- مجموعة الإجراءات المرتبة ترتيباً منطقياً لحل مشكلة معينة يطلق عليها:
 أ- المشكلة. ب- الخوارزمية. ج- اختبار صحة البرنامج.
 3 -A set of procedures arranged logically for solving a specific problem – can be called:
 a. problem b. algorithm c. program testing
- ٤- التأكد من خلو البرنامج من الخطأ يطلق عليها:
 أ- اختبار صحة البرنامج. ب- توثيق البرنامج. ج- الخوارزمية.
 4 -Making sure that the program is free of errors – can be called:
 a. program testing b. program documentation c. algorithm
- ٥- كتابة كل الخطوات التي اتخذت لحل مشكلة ما يطلق عليها:
 أ- توثيق البرنامج. ب- اختبار صحة البرنامج. ج- خرائط التدفق.
 5 -Writing down all the steps taken to solve a problem errors – can be called:
 a. program documentation b. program testing c. flowcharts
- ٦- يتضمن أسلوب حل المشكلة العديد من المصطلحات والمصطلح المعبر عن "إعداد كوب من العصير" هو:
 أ- خريطة تدفق. ب- خوارزمية. ج- مشكلة.
 6 -Problem-solving includes many terminologies, the terminology that expresses the preparation of a cup juice is:
 a. Flowchart b. algorithm c. problem
- ٧- يتضمن أسلوب حل المشكلة العديد من المصطلحات والمصطلح المعبر عن "مسألة رياضية" هو:
 أ- خوارزمية. ب- مشكلة. ج- تصميم برنامج على الكمبيوتر.
 7 -Problem-solving approach includes many of the terminologies, the terminology that expresses the mathematical problem is:
 a. Algorithm b. problem c. program design
- ٨- تمثيل تخطيطي يعتمد على رسم بعض الشكال القياسية لتوضيح ترتيب عمليات حل مشكلة نطلق عليه:
 أ- مشكلة. ب- الخوارزمية. ج- خرائط التدفق.
 8 -A diagramatic representation that depends on drawing some standard symbols to clarify the order of procedures to solve a problem can be called:
 a. Problem b. algorithm c. flowchart
- ٩- في خريطة التدفق التالية:
 عدد مرات التكرار (طباعة قيمة M) هو:
 أ- ٢ ب- ٣ ج- ٤



9- In the following flowchart:

عدد مرات التكرار (طباعة قيمة M) هو:
 أ- ٢ ب- ٣ ج- ٤

The number of iterations (print the value of M) is:

a- 2 b- 3 c- 4

10-In Flowchart of the previous question, the value of M after the end of the iterative loop equals:

a. 2 b. 3 c. 4

١٠- في خريطة التدفق بالسؤال السابق قيمة M بعد انتهاء الحلقة التكرارية تساوي:

أ- ٢ ب- ٣ ج- ٤

Chapter 2 Questions

First: Put (✓) in front of the correct sentence and (X) in front of the wrong one:

- () ١) لغة البرمجة VB.NET إحدى لغات البرمجة ذات المستوى العالي.
- 1 -The VB.net language is one of the high level languages. ()
- () ٢) لغة البرمجة VB.NET إحدى لغات البرمجة الموجهة بالأحداث.
- 2 -The VB.net language is one of Event Driven languages. ()
- () ٣) تتميز لغة البرمجة VB.NET بأنها اللغة الوحيدة ذات المستوى العالي.
- 3 -The VB.net language is the only high level language. ()
- () ٤) تُصنف لغة VB.NET كإحدى لغات البرمجة ذات المستوى العالي بسبب سهولة تعلمها.
- 4- The VB.net language is considered a high level language because it is easy to learn. ()
- () ٥) تستخدم لغة البرمجة VB.NET في إنتاج تطبيقات مكتبية وتطبيقات ويب.
- 5- The VB.net language is used in producing Windows applications and Web applications. ()
- () ٦) يؤخذ على لغة البرمجة VB.NET استخدامها في إنتاج تطبيقات ويب فقط.
- 6 -The VB.net language is used in producing Web applications only. ()
- () ٧) يؤخذ على لغة البرمجة VB.NET أنه لا يمكن استخدامها في إنتاج تطبيقات مكتبية.
- 7 -The VB.net language can't be used in producing Windows applications. ()
- () ٨) يتميز كل كائن بخصائص وسلوك معين يقوم به عندما يقع عليه حدث معين.
- 8- Every Object is characterized by certain properties and certain behaviour when a certain event occurs on it. ()
- () ٩) الأحداث والإجراءات الخاصة بأي كائن في لغة البرمجة VB.NET يطلق عليها Properties خصائص.
- 9- Events and procedures which belong to any object in VB.net language are called properties. ()
- () ١٠) اسم الكائن وحجمه ولونه جميعها نماذج لأحداث يمكن أن تقع على الكائن في لغة البرمجة VB.NET.
- 10- The name, the size and colour of an object are all samples of events that can occur to the object in VB.net language. ()
- () ١١) اسم الكائن وحجمه ولونه جميعها نماذج للخصائص التي يمكن أن تتصف بها بعض الكائنات في لغة البرمجة VB.NET.
- 11- The name, the size and colour of an object are all samples of properties of some objects in VB.net language. ()
- () ١٢) الأحداث عبارة عن الأوامر والتعليمات التي يتم تنفيذها عند وقوع إجراء معين على الكائن في لغة البرمجة VB.NET.
- 12- The Events are the commands and instructions which are carried out when a certain procedure occurs to the object in VB.net language. ()
- () ١٣) الإجراءات عبارة عن الأوامر والتعليمات التي يتم تنفيذها عند وقوع إجراء معين على الكائن في لغة البرمجة VB.NET.
- 13- The procedures are the commands and instructions which are carried out when a certain procedure occurs to the object in VB.net language. ()
- () ١٤) الضغط Click و D-Click نماذج لبعض الأحداث التي يمكن أن تقع على كائن في لغة VB.NET.
- 14- Pressing click and D-click are samples of some events that can occur to an object in VB.net language. ()
- () ١٥) إطار العمل .NET Framework يحتوي على المترجمات والمكتبات وبيئة تشغيل برامج دوت نت.
- 15 -Framework.net contains Compilers, libraries and runtime environment. ()
- () ١٦) المترجمات في إطار العمل .NET Framework عبارة عن بيئة تشغيل التطبيقات التي يتم إنتاجها بلغة البرمجة VB.NET.
- 16- Compilers in Framework. Net are considered the environment of runtime for applications which are produced in VB.net language. ()
- () ١٧) المترجمات عبارة عن برامج تقوم بترجمة الأوامر والتعليمات التي يكتبها المبرمج من لغة المستوى العالي إلى لغة الآلة.

- 17 - Compilers are programmes that translate commands and instructions written by the programmer from the high level language into machine language. ()
- ١٨) لغات البرمجة كائنية التوجه هي اللغات التي تعمل من خلال كائنات بالذاكرة.
- 18 -Object Oriented Programming Languages are the languages that work through objects in memory. ()
- ١٩) كل لغات البرمجة التي تقوم بتنفيذ مجموعة من التعليمات والأوامر تعتبر من لغات البرمجة الموجهة بالأحداث.
- 19 -All programming languages which carry out a group of commands and instructions are considered as Event Driven languages ()
- ٢٠) يعتبر Visual Studio بيئة تطوير متكاملة IDE لأنها تضم مجموعة من الأدوات والعناصر والخصائص اللازمة لإنتاج تطبيقات.
- 20- Visual Studio is considered IDE because it includes a group of tools, elements and characteristics necessary to produce app. ()

Second: Choose the correct answer to complete each statement:

- ١- تعتمد لغات البرمجة كائنية التوجه على:
- أ- استخدام تطبيقات مكتبية. ب- استخدام تطبيقات ويب. ج- كائنات في ذاكرة الكمبيوتر.
- 1-Object Oriented programming language depends on:
- a- using Windows applications. b- Using Web applications
- c- Objects in computer memory.
- ٢- تستطيع إنتاج تطبيقات مكتبية أو تطبيقات ويب باستخدام:
- أ- كائنات في ذاكرة الكمبيوتر. ب- لغة البرمجة VB.NET. ج- خصائص وأحداث.
- 2-You can produce Windows applications or Web applications by using:
- a- Objects in computer memory b- VB.net language c- Properties and Events
- ٣- مجموعة الصفات التي يتصف بها الكائن من طول واسم ولون وغيرها يطلق عليها:
- أ- خصائص. ب- إجراءات. ج- أحداث.
- 3 -Characteristics which describe the object such as size, name and colour are called:
- a- Properties b- procedures c- Events
- ٤- النقر Click على زر المر يعتبر:
- أ- خاصية. ب- إجراء. ج- حدث.
- 4-Click on Button is:
- a- property b- procedure c- Event
- ٥- مجموعة الوامر والتعليمات التي نرغب في تنفيذها يطلق عليها:
- أ- خصائص. ب- إجراءات. ج- أحداث.
- 5-Commands and instructions which we want to carry out are called:
- A -properties B -producers c - Events
- ٦- مصطلح Properties يشير إلى:
- أ- السمات التي تصف الكائن وتميزه. ب- الأحداث التي يمكن أن تقع على الكائن. ج- الأوامر والتعليمات التي يتم تنفيذها.
- 6 -The Properties term refers to:
- a- Features that describe the object. b- Events that can occur to the object. c- Commands and instructions that are carried out.
- ٧- مصطلح Events يشير إلى:
- أ- السمات التي تصف الكائن وتميزه. ب- الأحداث التي يمكن أن تقع على الكائن. ج- الأوامر والتعليمات التي يتم تنفيذها.
- 7-The Events term refers to:

- a- properties that describe the object. b- Events that can occur to the object.
c- Commands and instructions that are carried out.

٨- مصطلح Procedures يشير إلى:

- أ- السمات التي تصف الكائن وتميزه.
ب- الأحداث التي يمكن أن تقع على الكائن.
ج- الأوامر والتعليمات التي يتم تنفيذها.

8-The Procedures term refers to:

- a- properties that describe the object. b- Events that can occur to the object.
c- Commands and instructions that are carried out.

٩- المكتبات والمترجمات وبيئة تشغيل التطبيقات من أهم العناصر المكونة لـ

ج- Net Framework

ب- Event Driven.

أ- Object Oriented

9-libraries, Compilers and Environment of runtime of applications are the most important components of:

- a- Object Oriented. b- Event Driven. c- Framework.net.

١٠- بيئة التطوير المتكاملة IDE تطلق على:

ج- Net Framework

ب- Visual Studio.

أ- Visual Basic.NET

10 -IDE is called:

- a- Visual Basic.net b- Visual Studio. c- Framwork.net.

Chapter 3 Questions

First : Put (✓) in front of the correct statement and (×) :

- (١) وظيفة الخاصية RightToLeft لنافذة النموذج Form تحديد اتجاه أدوات التحكم من اليمين إلى اليسار.
1- The function of the property RightToLeft of the Form is to define the direction of Controls from right to left. ()
- (٢) وظيفة الخاصية RightToLeft لنافذة النموذج Form تحديد حالة النموذج على الشاشة في وض وضع تكبير أو تصغير.
2- The function of the property RightToLeft of the Form is to define the state of the Form on the screen in a position of Maximizing or Minimizing. ()
- (٣) ضبط الخاصية ControlBox لنافذة النموذج يتحكم في إظهار Form في وضع التكبير عند تشغيل البرنامج.
3- Setting the property ControlBox of the Form can control the Form in a position of Maximizing during programme.runtime. ()
- (٤) تستخدم الخاصية Name في إظهار نص معين في شريط عنوان نافذة المستخدم كاسم للنافذة.
4- The property "Name" is used in showing a certain Text in the title bar of user window a name of the window. ()
- (٥) تستخدم الخاصية Text في إظهار نص معين في شريط عنوان نافذة المستخدم.
5- The property Text is used in showing a certain text the title bar of of user window . ()
- (٦) ضبط بعض خصائص نافذة النموذج Form يطبق على أدوات التحكم التي يتم وضعها على نافذة النموذج.
6- Setting some properties of the Form is applied to Controls which are placed on the Form. ()
- (٧) الخاصية WindowState يظهر أثر ضبطها لنافذة النموذج Form في نمط التشغيل فقط.
7- The effect of setting the WindowState property of the form appears only in runtime mode ()
- (٨) تستطيع تغيير موضع زر الأمر Button على نافذة النموذج من خلال الخاصية Size.
8- You can change the location of Command Button on the Form through Size property. ()

- ٩) تستطيع تغيير موضع زر الامر Button على نافذة النموذج من خلال الخاصية Location. ()
- 9- You can change the location of Command Button on the Form through Location property. ()
- ١٠) إدراج أدوات التحكم تلقائياً على نافذة النموذج Form يكون عند الإحداثي (٠ و ٠) في منتصف نافذة النموذج. ()
- 10- Placing Controls automatically on the Form on the co-ordinate (0-0) is in the middle of the Form. ()
- ١١) يمكن تغيير حجم أداة العنوان Label يدويا إذا كانت AutoSize=True. ()
- 11- You can change the size of Label manually if AutoSize=true. ()
- ١٢) يمكن تغيير حجم أداة العنوان Label يدويا إذا كانت AutoSize=False. ()
- 12- You can change the size of Label manually if AutoSize=false. ()
- ١٣) تنفرد أداة التحكم TextBox بالخاصية PasswordChar. ()
- 13- Textbox control tool: is the only tool which has the property passwordChart. ()
- ١٤) تنفرد أداة التحكم TextBox بالخاصية AutoSize. ()
- 14- Textbox control tool: is the only tool which has the property AutoSize. ()
- ١٥) يشترك كل من أداة التحكم ListBox وأداة التحكم صندوق التحرير والسرد ComboBox في الخاصية Items. ()
- 15- ListBox and ComboBox share in "Items" property. ()
- ١٦) يشترك كل من أداة التحكم ListBox وأداة التحكم صندوق التحرير والسرد ComboBox في الخاصية Suggest. ()
- 16- ListBox and and ComboBox share in " Suggest " property. ()
- ١٧) أداة التحكم التي تستخدم في احتواء مجموعة من عناصر التحكم ذات الوظيفة الواحدة على النموذج هي GroupBox. ()
- 17- GroupBox is the tool used in containg a group of controls, these controls have the same function on the Form. ()
- ١٨) أداة التحكم التي تستخدم في احتواء مجموعة من عناصر التحكم ذات الوظيفة الواحدة على النموذج هي ListBox. ()
- 18- ListBox is the tool used in containg a group of controls, these controls have the same function on the Form. ()
- ١٩) عنصر التحكم الذي يمكن استخدامه على نافذة النموذج اختيار نوع الطالب "ذكر" أم "أنثى" هو ChechBox. ()
- 19- CheckBox can be used on the Form to choose the Gender of student male or female. ()
- ٢٠) ComboBox هو أداة التحكم التي تسمح للمستخدم اختيار عنصر واحد من عدة عناصر في أصغر مساحة ممكنة على نافذة النموذج. ()
- 20- Combobox is the control tool that allows the user to choose one element of several elements in the smallest possible space on the form window. ()

Second: Choose the correct answer to complete each statement:-

- ١) وظيفة الخاصية RightToLeft لنافذة النموذج Form هي:
- أ- تحديد اتجاه أدوات التحكم من اليمين إلى اليسار.
- ب- تحديد إذا ما كان تخطيط أدوات التحكم على النموذج من اليمين إلى اليسار.
- ج- تحديد حالة شاشة النموذج في وضع تكبير أو تصغير.
- 1- The function of "Right to Left" property of the Form is:
- a- define the direction of Control tools from Right to Left.
- b- Define whether the layout of ControlTools on the Form is from Right to Left.
- c-define the state of the window in a state of maximaizing or minimaizing.
- ٢- الخاصية ControlBox لنافذة النموذج Form يساعد في:
- أ- إظهار أو إخفاء صندوق التكبير.
- ب- التحكم في إظهار نافذة النموذج في وضع تصغير/تكبير/عادي في نموط التشغيل.
- ج- التحكم في إظهار أو إخفاء صندوق التحكم في نافذة النموذج.

2-ControlBox property of the Form is helping to:

a- showing or hiding of Maximaizing Box.

b- Control the appearance of the Form whether it is in a position of Minimaizing / Maximaizing/ Normal.

C-Control the appearance or disappearance of ControlBox in the Form

٣- الخاصية المستخدمة في إظهار نص معين في شريط عنوان نافذة النموذج هي:

ج- FormBorderStyle

ب- Text

أ- Name

3-The used property in showing a certain Text on the titlebar of a Form is:

a- Name

b-Text

c-FormBorderStyle

٤- عند ضبط بعض خصائص نافذة النموذج Form فإنها تطبق على أدوات التحكم التي يتم وضعها على نافذة النموذج من هذه الخصائص:

ج- Text

ب- ForeColor

أ- Name

4-On setting some properties of the Form, they are applied on Control Tools

Which are placed on the Form (one of them is):

a-Name

b-Forecolor

c-Text

٥- الخاصية التي يظهر أثر ضبطها في نمط التشغيل لنافذة النموذج Form هي:

ج- RightToLeft

ب- WindowState

أ- FormBorderStyle

5-The effect of setting this property doesn't appear unless in runtime mode (This property is):

a-FormBorderStyle

b-WindowState

c-RightToLeft

٦- الخاصية المسئولة عن شكل وحجم وتأثير خط النص الظاهر على زر الأمر Button هي:

ج- Font

ب- ForeColor

أ- BackColor

6-The property which is responsible for the size, shape and effect of the Text font shown on the Button is:

a-BackColor

b-Forecolor

c-Font

٧) تستطيع تغيير موضع زر الأمر Button على نافذة النموذج Form من خلال العمليات التالية ما عدا:

ج- ضبط الخاصية Location.

ب- ضبط الخاصية Size.

أ- السحب والإفلات باستخدام الفأرة.

7-You can change the position of the Button on the Form through the following processes except for:

A-drag and drop by the mouse

b-setting Size property

c-setting Location property

٨- تستطيع تغيير موضع زر الأمر Button على نافذة النموذج Form من خلال:

أ- ضبط الخاصية Location. ب- ضبط الخاصية Size. ج- المربعات الثمانية حول زر الأمر Button.

8-You can change the position of the Button on the Form through:

a- setting Location property

b-setting Size property

c-the eight squares around the Button

٩- عند إدراج أي أداة تحكم بالضغط D-Click من مربع الأدوات Toolbox على نافذة النموذج فإن المكان الافتراضي لإظهارها هو:

ب- منتصف نافذة النموذج.

أ- الإحداثي (٠,٠)

ج- يختلف موضع أداة التحكم حسب حجم نافذة النموذج Form.

9-On inserting any ControlTool by pressing D-Click from the ToolBox on the Form , the appropriate place to be shown is:

A-coordinate(٠ , ٠)

b-the middle of the Form

c-the position of ControlTool is different according to the size of the Form

١٠) يتحدد حجم أداة العنوان Label تلقائياً على نافذة النموذج إذا كانت الخاصية:

ب- BordarStyle = FixedSingle

أ- AutoSize = False

ج- AutoSize = True

10-The size of Label is defined automatically on the Form if the property is:

a-AutoSize = False

b- BorderStyle= FixedSingle

c- AutoSize=True.

١١- يمكن تغيير حجم أداة العنوان Label يدويا إذا كانت الخاصية:

ج- AutoSize = True

ب- BorderStyle = FixedSingle

أ- AutoSize = False

11-You can change the size of control "Label" manually if the property is:

a- AutoSize = False

b- BorderStyle= FixedSingle

c- AutoSize=True

١٢- الخصائص التالية جميعها لأداة التحكم TextBox ما عدا الخاصية:

ج- MaxLength

ب- MultiLine.

أ- AutoSize.

12-The following properties belong to TextBox except for:

a-AutoSize

b-MultiLine

c-MaxLength

١٣- خاصية واحدة مما يلي ينفرد بها الكائن TextBox:

ج- PasswordChar

ب- Name

أ- AutoSize

13-The Object TextBox is marked by one property:

a-AutoSize

b-Name

c-PasswordChart

١٤- القيمة الصحيحة التي يمكن استخدامها من اختيارات التالية لضبط الخاصية PasswordChar لأداة التحكم TextBox هي:

ج- *

ب- True

أ- PW

14-The right value which can be used to set the PasswordChart of the TextBox is:

a-Pw

b-True

c- *

١٥- تشترك كل من أداة التحكم ListBox وأداة التحكم صندوق التحرير والسرد CompoBox في الخاصية:

ج- SelectionMode

ب- Item.

أ- Suggest

15-The ListBox and ComboBox share in this property:

a-Suggest

b-Item

c-SelectionMode

١٦- أداة التحكم التي تستخدم في احتواء مجموعة من عناصر التحكم ذات الوظيفة الواحدة على النموذج هي:

ج- GroupBox

ب- ListBox

أ- ComboBox.

16-The ControlTool which is used in containing a group of controls that have the same function on the Form is:

a-ComboBox

b-ListBox

c-GroupBox

١٧- عنصر التحكم الذي يمكن استخدامه على نافذة النموذج اختيار نوع الطالب "ذكر" أم "أنثى" هو:

ج- TextBox

ب- CheckBox

أ- RadioButton

17-The Control tool which can be used on the Form to choose Gender of the student "male"or "female" is:

a-RadioButton

b-CheckBox

c-TextBox

١٨- أداة التحكم الذي يمكن استخدامها على نافذة النموذج بحيث تسمح للمستخدم اختيار أكثر من بديل هي:

ج- CheckBox

ب- GroupBox

أ- RadioButton

18-The ControlTool which can be used on the Form and allows the user to choose more than one alternatives is:

a-RadioButton

b-GroupBox

c-CheckBox

١٩- أداة التحكم التي تسمح للمستخدم باختيار عنصر واحد من ١٥ عنصر في أصغر مساحة ممكنة على نافذة النموذج هي:

ج- RadioBox.

ب- ListBox.

أ- ComboBox.

19-The ControlTool which allows the user to choose one item of 15 in the smallest possible area on the Form is:

a-ComboBox

b-ListBox

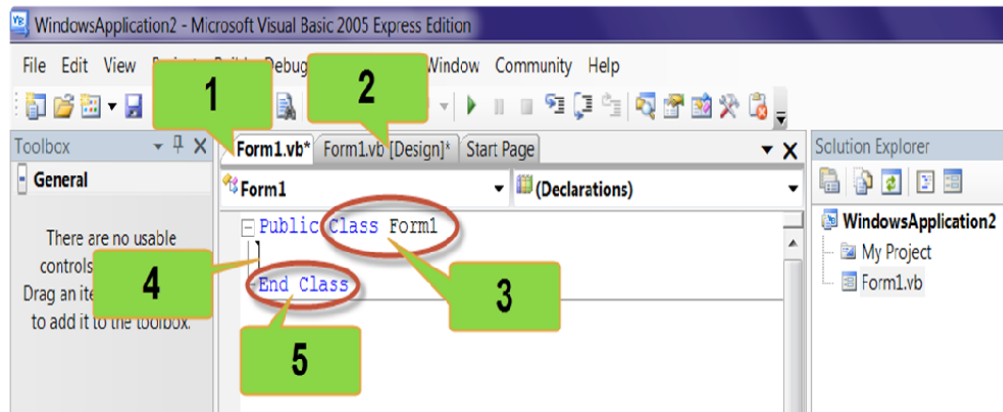
c-RadioButton

Chapter 4 Questions

1) Put (✓) or (X) :-

- ١- نافذة الكود التي من خلالها يمكن كتابة الأوامر والتعليمات ()
- 1- Code window through which commands and instructions can be written. ()
- ٢- يمكن فتح نافذة الكود فقط من خلال الضغط على مفتاح F7 . ()
- 2- The code window can be opened only by pressing the F7 key. ()
- ٣- عندما يتم فتح نافذة الكود لأول مرة يظهر به إعلان عن تصنيف Class باسم Form1 ()
- 3- When the code window is opened for the first time, an advertisement for the Class Classification appears with the name Form1. ()
- ٤- يمكن كتابة الكود الخالص بنافذة النموذج أسفل سطر نهاية التصنيف End Class ()
- 4- The code for the form window can be written below the End Class line. ()
- ٥- في شريط عنوان IDE يظهر اسم الحل واسم الاصدار المستخدم من IDE ()
- 5- In the title bar of the IDE, the name of the solution and the name of the version used from the IDE appear ()
- ٦- يمكنك فتح نافذة الكود من خلال نافذة الحل عن طريق القائمة المختصرة لملف نافذة النموذج . ()
- 6- You can open the code window through the solution window through the shortcut menu of the form window file. ()
- ٧- في نافذة الكود قائمة ال Class Name تعرض أحداث أداة التحكم التي تم اختيارها من قائمة Method Name ()
- 7- In the Code window, the Class Name list displays the events of the controller that was selected from the Method Name list. ()
- ٨- عند فتح قائمة ال Class Name تظهر أسماء أدوات التحكم مطابقة لخاصية Name لدى كل واحدة منها. ()
- 8- When you open the Class Name list, the names of the controls appear corresponding to the Name property of each one of them. ()
- ٩- معالج الحدث Event Handler عبارة عن الحدث الذي يستدعى عند وقوع إجراء ما . ()
- 9- The event handler is the event that is called when an action occurs. ()
- ١٠- عندما ينشأ معالج حدث Event Handler يتكون اسمه من اسم أداة التحكم واسم الحدث . ()
- 10- When an event handler is created, its name consists of the name of the controller and the name of the event. ()
- ١١- يكتب كود معالج الحدث Event Handler قبل نهاية سطر معالج الحدث End Sub . ()
- 11- The event handler code is written before the end of the end sub line. ()
- ١٢- يتم ضبط الخصائص فقط من خلال نافذة الخصائص . ()
- 12- The properties are only set through the properties window. ()
- ١٣- لضبط الخصائص برمجياً تستخدم الصيغة ControlName.Property=Value . ()
- 13- To set the properties programmatically the formula ControlName.Property=Value is used. ()
- ١٤- في الصيغة ControlName.Property=Value أداة التحكم يمثلها كلمة Value . ()
- 14- In the formula ControlName.Property=Value, the control tool is represented by the word Value. ()

3) From the above, the contents of the code window are:



Number	Indicate
(.....)	The end of class
(.....)	The place to write the codes of the class
(.....)	The name of the file that saves the design of the form interface
(.....)	The name of the file that saves the code
(.....)	The start of the class

2) Explain the components of the general syntax to adjust the properties of controls programmatically:

ControlName.Property = Value

ControlName	Property	Value

3) Explain the following codes through your pervious study for the general syntax to adjust the properties of control programmatically:

(A) Button2.Text = "END"

.....

(B) Label1.AutoSize = True

.....

حمل الآن

مجاناً وحصرياً

المراجعة رقم (4)

الترم الاول



Chapter (1) Problem Solving

* **A problem:** means a situation that requires a solution **Or** an objective you want to achieve through following consecutive steps sequentially..

* **A problem solving:** is the steps, activities, and processes to be done to reach an output or objective

- Problem Solving Stages.

(1) **Problem Definition:** is the identification of required outputs, available inputs and arithmetic and logical operation to be executed .

(2) **Algorithm :** is used to solve a problem through logically arranged procedures (Fowlchart).

(3) **Program design:** using computer to translate this flowchart into one of the programming language.

(4) **Program Testing:** to make the programs free of errors.

(5) **Program Documentation:** write all steps taken for solving the problem. It is done to go back for feedback and correction.

Flowchart : is a diagram that uses **standard** graphical symbols to illustrate the sequence of steps required for solving a problem or specific question.

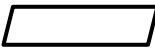
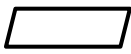
Some advantages of flowcharts:

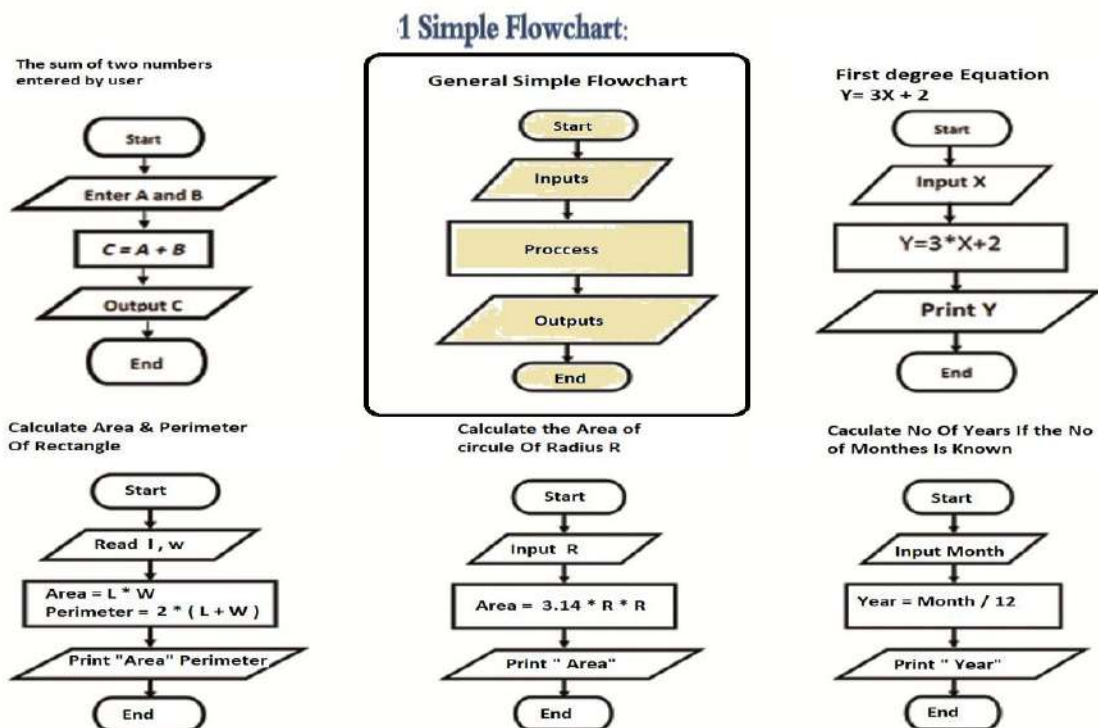
- Facilitating the reading and understanding of the problem and illustrating to the programmer what must be done.
- Useful to explain the program to others.
- helping in documenting the program in better manner, especially if the program is complicated

* The most common symbols are as follows:

Name	Symbol	Significance
Terminal		To represent the Start and the End of the solution steps.
Input / output		To enter data or output results. Print
Process		To type an Assignment statements or arithmetic operations. +, -, *, /
Decision		To represent a statement, question, comparison or choice. <, >, ?
Flow lines		To connect the chart symbols together and to define the sequence.

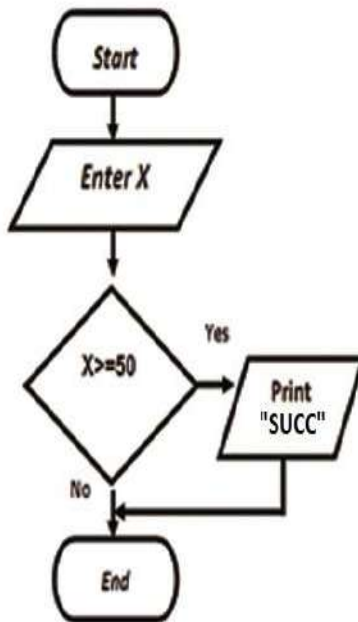
*** To construct a Flowchart we should consider the following:**

- 1 - The flowchart should start with the Start symbol  and end with the End symbol.
- 2- The flow lines show the exact order of an Algorithm are from top to bottom . ↓
- 3- We used the term “**Enter**” to entering values inside the parallelogram  . We can also use another terms to get the same meaning like “**Read**”, “**Input**” or “**Get**”.
- 4- We are written the sum equation inside the rectangle  .
- 5- We are used Decision symbol  to express a question, comparison, choice and condition .
- 6- We used the term “**Output**” inside the parallelogram  we can also use another term like “**Print**”.
- 7- A **variable** refers to a memory storage that holds a value.
- 8- The expression on the left side of any equation should contain only one variable.
- 9- The expression on the right side of the equation may contain values or arithmetic expressions that have one or more variables. *Such as* ($C = A + B$)

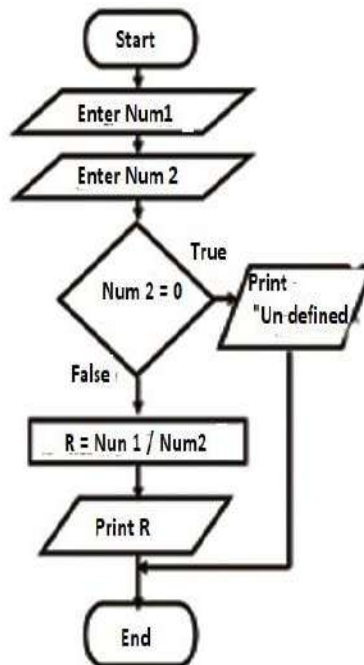


'Branching Decision' in Flowcharts

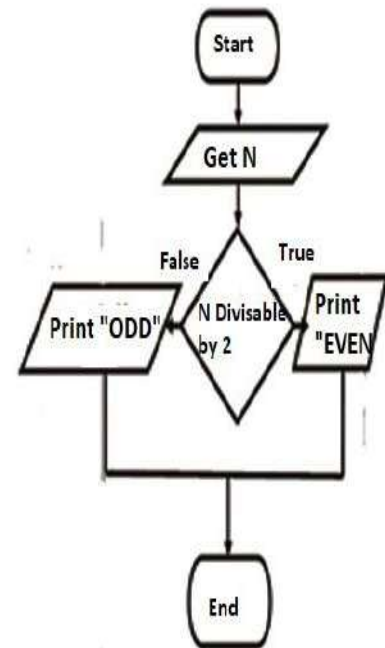
If the value of score X is greater then or equal 50 the word "Succ" will be printed



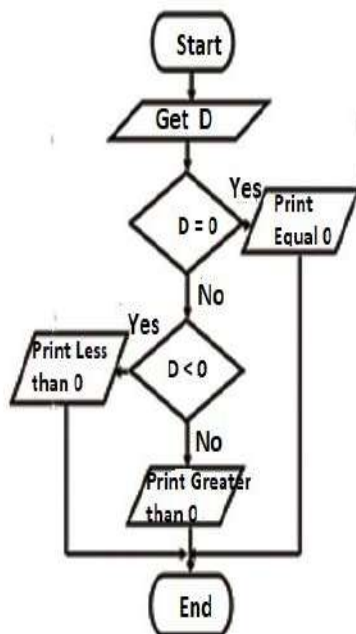
Dividing two numbers Or print "Un Defined" in case the divisor =0



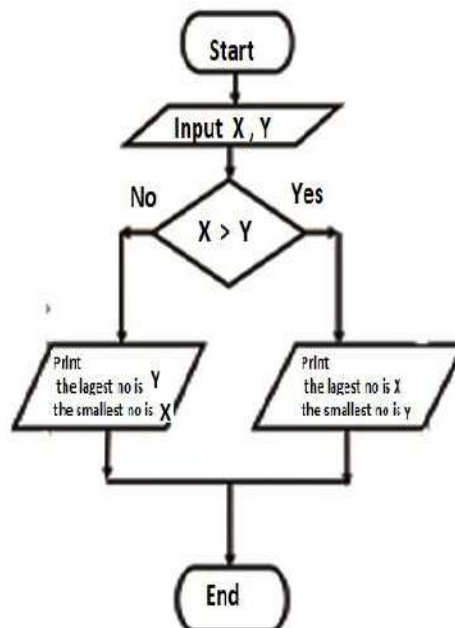
Enter a number and print Its Type "ODD" Or "EVEN"



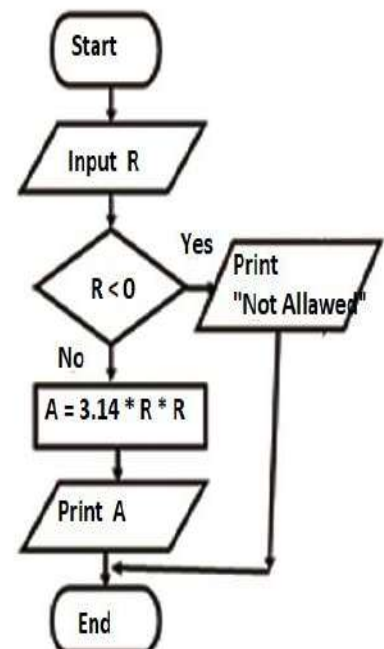
Enter the temprature Degree and print "greater than 0 , less than 0 , "Eual 0"



Enter two un equal numbers and print "The largest no is ...? , "The smallest no is ... ?

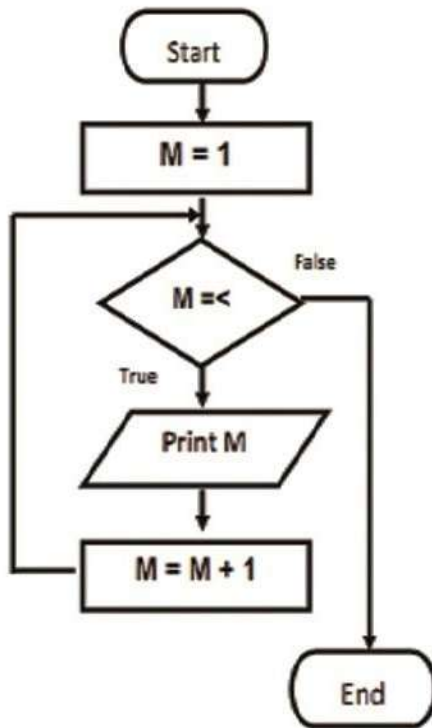


Enter the radius and print the area of the circul or print Not allowed in case of the radius is negative

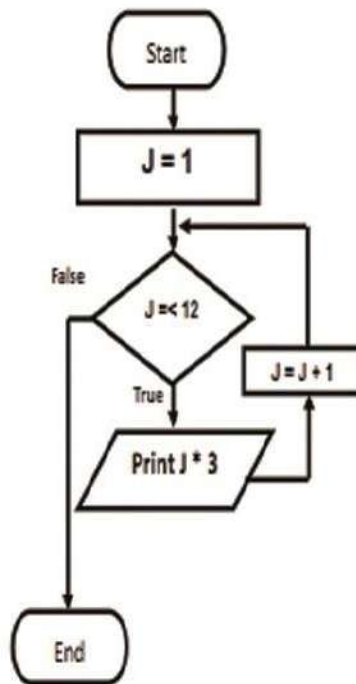


Loop

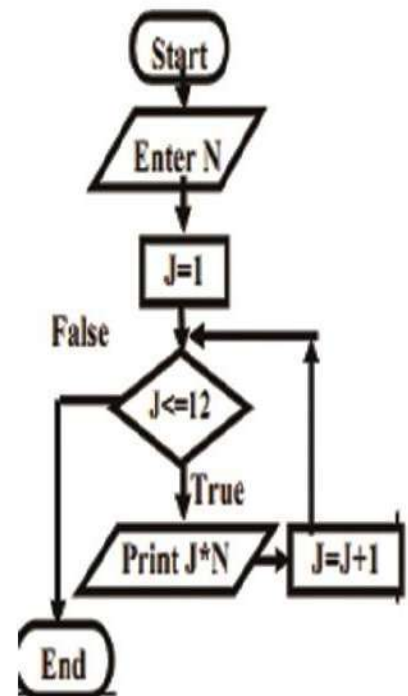
Print Out the numbers
from 1 to 3



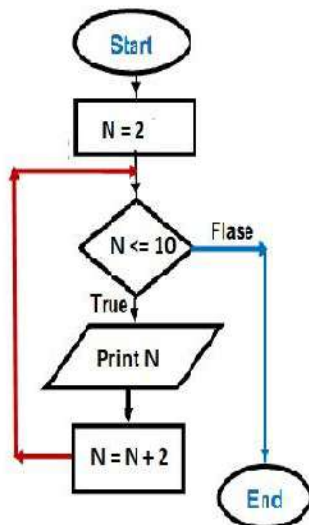
Print Multiplication
Table of no 3



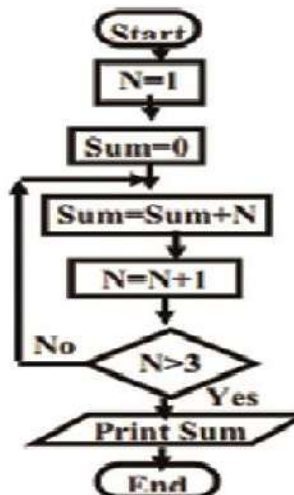
Print the required
Multiplication table



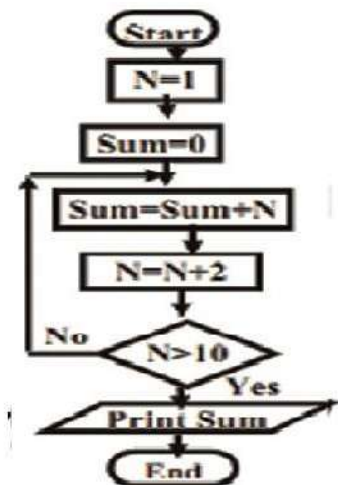
Print the Even Numbers
from 1 to 10



Print out the sum of integer
numbers from 1 to 3



Print the sum of odd
numbers from 1 to 10



Chapter (2) Visual Basic. Net

* **Programing Language Visual Basic .Net: (VB.NET)**

It is one of the **high level** programming languages and designed to **easy to learn** as its commands and instructions **use English language** vocabulary and it can be used in many **applications** such as:

- 1- Windows applications
- 2- Web applications
- 3- Mobile Applications

Programming and computer memory

Commands and instructions which are written in Visual Basic.net enable you to create objects in computer memory and every object has:

- 1- **Properties** such as (size-color- font) of the text written on the program interface.
- 2- **Events** such as click on a command button.
- 3- **Procedures**, each one contains commands and instructions which are carried out when calling this procedure.

So, the Visual Basic.net is considered:

Object oriented as its programs work through objects in **Computer Memory**.

Event Driven as commands and instructions are carried out as soon as certain event occurs.

The language of Visual Basic .Net and Framework.Net

The Framework.Net provides the following:

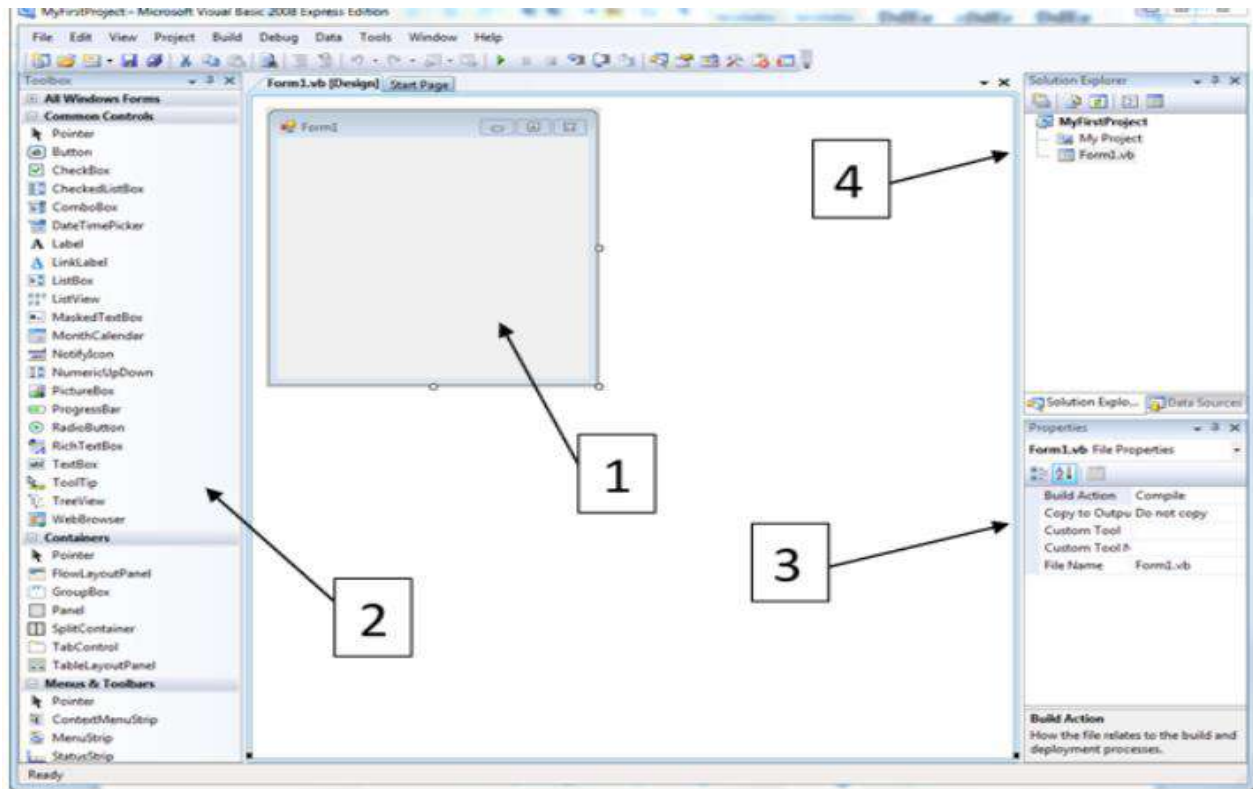
- * **Libraries** through which we create the objects,
- * **Runtime environment** (called Runtime) in computer memory where Applications produced by the language of Visual Basic.net language work in.
- * **Compilers** which compile commands and instructions written in Programming language into machine code which the Computer deals with.

Visual Basic .Net and IDE

The programmer of Visual Basic.net needs Integrated Development Environment (IDE) which provides tools and merits to the programmer that help him create applications (windows – mobile – web.....). Visual Studio represents IDE as shown in figure (2-1):

© Main elements of IDE screen:

- The term (IDE) refer to Integrated Development Environment.
- IDE is called also **Visual Studio**.



* The most important components of IDE screen:

(1) **Form**: The form is the **interface** which the user deals with through different controls such as Button, Textbox, label.....etc.

(2) **ToolBox**: It contains tools of **controls** which can be put on the form and can be shown in categories

(3) **Properties window**: Each tool of the above Common Controls has a group of **properties** which can be adjusted through "Properties Window" as shown in Figure (2-6)

(4) **Solution Explorer**: It is a list of **folders and files** of the projects in this part

Chapter (3) Controls

Notes:

- There are common properties among different Controls such as (Name-Text – Forecolor – Backcolor - Right To Left.....etc.)
- There are some properties which their effect doesn't appear on Controls until you set some other properties , for example the Right to Left Layout property doesn't work unless the value Right to Left equals Yes.
- There are properties of the form, if they are set, they are applied to Controls which are placed on this Form such as font and ForeColor properties.
- The default value of the property (Text) and the property (Name) is the same and it is (Form1).
- When you set some properties, the effect of setting appears directly on the Form in design mode of the program.
- There are some properties which their effect doesn't appear on the Form or Controls until you run the program by press **F5**. For Example (**Window State**) .

Form Control

The Form has many properties which share in defining the form of program screen we want to create. Here are some properties of the Form:

	Form Properties	Function
1	Name	Name of the Form used in the code. Effect in design mode .
2	Text	Text appearing on the title bar of the Form.
3	BackColor	The Background color of the Form's window.
4	FormBorderStyle	The Border outline of the Form's window. (Sizable , None)
5	ControlBox	Enable or disable (hide) the control box appearance in the window.
6	MinimizeBox	Enable or disable (hide) the appearance of the minimize button in the window.
7	MaximizeBox	Enable or disable (hide) the appearance of the maximize button in the window.
8	RightToLeft	The direction of Controls on the form Window From Right to Left. its value (Yes / No)
9	RightToLeftLayout	The layout of Controls on the Form from right to left.
10	WindowState	It defines the Window State of the Form (Maximizing, Minimizing or normal). Its effect appear in Run Mode only

Button Control



- * A **button** control is the most commonly used.
- * A user will use a **button** by clicking it to perform a specific task.

- Button control property?

Property	Function
Location	The location of the (Button) on the Form's window.
Size	The height and width of the (Button) on the Form's

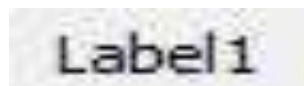
Notes

Eight squares appear on the borders of the Button.

You can change the size of the Button by using the process of drag and drop using the pointer of the mouse through the eight squares.

You can change the location of Button by using the process of drag and drop after moving the mouse pointer until it turns into a shape with four heads.

label Control



- * A **label** It is a tool used in showing a Text on the Form Window which can't be changed during program Runtime.

- Label control properties:

	Property	Function
1	BorderStyle	Choosing the Border Style of the Label
2	AutoSize	The Size of the Label is defined automatically according to the written Text if the Value of property equals true.

Notice: You can change the size of Label manually by using the process of drag and drop when the Value of the property **AutoSize** is **false** through the eight handles in design mode only and its effect appears in design mode and runtime mode.

TextBox Control



* A TextBox is a tool used to insert (input) data from the user during programme run time.

- Textbox control Properties:

	Property	Function
1	MaxLength	It defines the maximum number of letters which can be inserted in the TextBox. Effect in run mode only .
2	PasswordChar	It defines a symbol used instead of written text in case we have a password.
3	Multiline	allows multiple lines within the text box control tool.

ListBox Control

* (ListBox) control is used for Shows a list of



items

-ListBox control properties:

	Property	Function
1	Items	A group of items shown in the ListBox
2	Sorted	It defines whether the elements in the list are sorted or not.
3	SelectionMode	It defines whether it is possible to choose one item or more shown in the ListBox. Effect in runtime mode only .

ComboBox Control



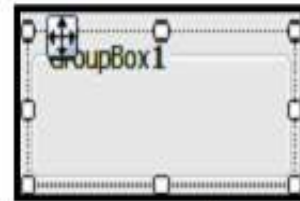
- ComboBox control Properties:

is one of the controls, that displays a drop-down list in the **smallest** possible area from which **one** item can be selected. Effect of all properties appear in **run mode**.

	Property	Function
1	Items	A group of items which are shown in comboBox.
2	AutoCompleteSource	It is a source of suggested items to select from.
3	AutoC ompleteMode	It defines the method of list completing process.

GroupBox Control

Is used to **group** other controls of same function together on the Form window



RadioButton Control



* A RadioButton is used if The program user **selects one alternative only**..

- RadioButton control properties:

	Property	Function
1	Text	It is the Text shown on RadioButton
2	Checked	It shows whether RadioButton has been chosen or not.

Checkbox control



* (CheckBox) control is used for placing **some alternatives** to enable the user to select

Checkbox control properties:

	Property	Function
1	Location	The location of the Checkbox on the Form's window.
2	Checked	Indicates if the (Checkbox) has been selected or not.
3	Visible	Determine whether the control (Checkbox) is visible or hidden

Chapter (4)

Code Window

-Code Window is a place we can write instructions and codes of the program .

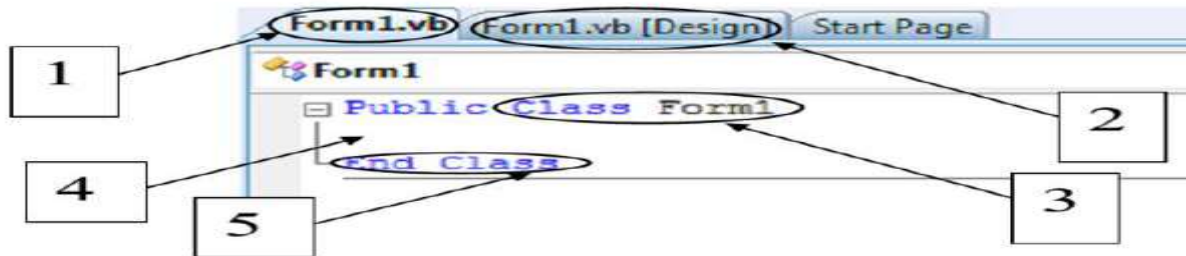
-To open the (Code Window) of (Form1) perform the following:

- (1) Make sure that the Form window is active.
- (2) Press (F7) from the keyboard.

*** Another way to open the (Code Window) of (Form1):**

- [1] In the (Solution Explorer) window, from the shortcut menu of file (Form1.vb), choose (View Code).
- [2] Select (Code) from the (View) menu.

The Code window is displayed as shown in figure (4-1)



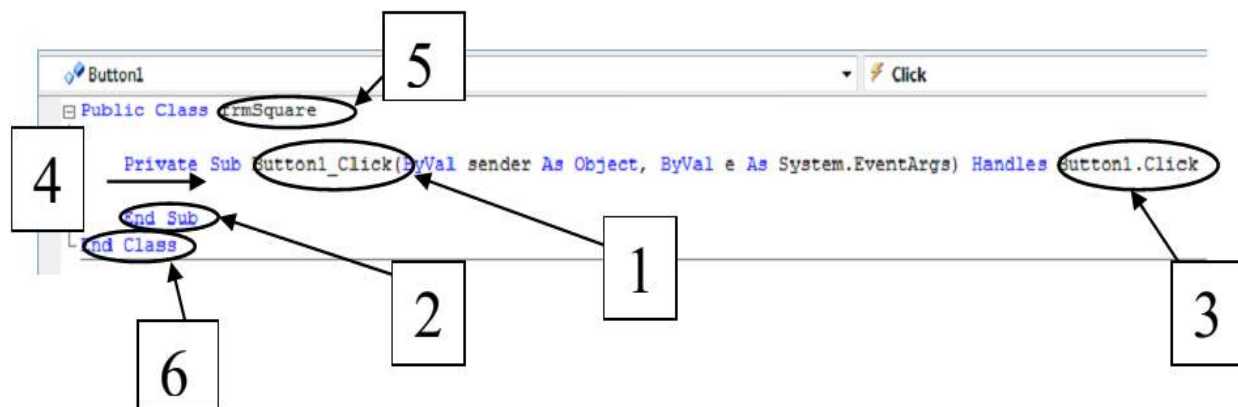
-Main components of Code window:

- (1) Name of the file where Codes are saved.
- (2) Name of the file where the Form window is saved.
- (3) The declaration of Class; its name is Form1.
- (4) Space between the two lines; to type codes for the class Form1.
- (5) The end of the Class.

*** After choosing (View Code) the following lists will be used:**

- (1) A drop-down menu of (Class Name), which refers to the name of controls placed on the Form.
- (2) A drop-down menu of (Method Name) or events; associated with the control selected from the (Class Name) menu.





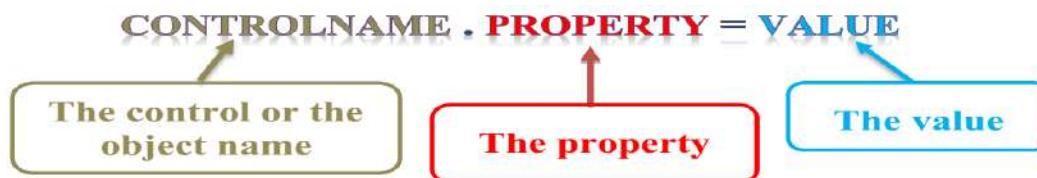
-Event Handler: It's a procedure which contains a code that is carried out when a corresponding event occurs.. as shown in figure :

Button1_Click

- (1) The procedure name composed of (object name, event name)
- (2) End of procedure
- (3) What causes the call of the procedure (event occurrence).
- (4) Between the two lines shown; you can write statements or codes that will be executed after invoking the procedure.
- (5) The declaration of the Class (frmSquare)
- (6) The end of the Class

- Setting the properties programmatically:

Control (Object) Name. Property = Value



e.g. Property (Text).

Lable1.text = "Egypt"

Explain the following.,? Or Give Reason ?

The appearance of the text on title bar for form in right direction.

Because the property RightToLeft take a value Yes

By running the program the ControlBox appears in the left direction.

Because the property RightToLeft Layout take a value True.

Eight squares appear on the borders of the Button.

You can change the size of the Button by using the process of drag and drop using the pointer of the mouse through the eight squares.

Text color on the Button appeared red.

Because the property ForeColor take a value red.

We can't change the size of label control.

Because the property AutoSize take a value True.

Eight squares appear on the borders of the label control.

Because the property AutoSize take a value False.

By writing in Textbox tool the symbol *** appears.**

Because the property PasswordChar take a value *.

We can't write more than one line in textbox tool.

Because the property Multiline take a value False.

We can't write more than 10 characters in textbox tools.

Because the property Maxlength take a value 10

The elements appears in Listbox unsorted.

Because the property Sorted take a value False .

By using the Listbox tool, we can select more than one element.

Because the property SelectionMode take a value MultiExtended or MultiSimple .

By writing in ComboBox tool, can't display any suggestions.

Because the property AutoCompleteSource and AutoCompleteMode take a value None.

The Checkbox appears selected.

Because the property Checked take a value True

One square appear on label tool.

Because the property AutoSize take a value true

Two squares appear on the textbox tool.

Because The property multiline take the value False.

The current Form window appear, in full screen mode.

Because The property WindowState take the value Maximized

There is no Border appeared around the form1 window.

Because The property FormBorderStyle take the value None for the form1.

The elements in ListBox (Tool) is ordered (arranged)

The property Sorted take the value true for the

حمل الآن

مجاناً وحصرياً

امتحانات رقم (1)

الترم الاول



Question1: Put (✓) in front of the correct sentence and (X) in front of the wrong one:

1. The property Text is used in showing a certain text the title bar of user window. ()
2. The program testing is writing down all the steps taken to solve a problem. ()
3. Flowcharts help to facilitate understanding of the problem, analyse and convert it to a program. ()
4. You can produce Windows applications or Web applications by using VB.net language. ()
5. Commands and instructions which we want to carry out are called properties. ()
6. The symbol  is used to represent the data input operation. ()

Question2 :Complete the Following:

- 1- The Control Tool which can be used on the Form and allows the user to choose more than one alternatives is.

(RadioButton – GroupBox – CheckBox)

- 2- It's a procedure which contains a code that is carried out when a corresponding event occurs.

(Event Handler – Form – Solution Explorer)

- 3- The size of Label is defined automatically on the Form if the property AutoSize.

(False – True – Yes)

- 4- It is one of Controls which can be placed on the Form. When you click it, it does a certain task.

(Button – Label – Textbox)

- 5- The ListBox and ComboBox share in this property .

(Suggest – Items – SelectionMode)

- 6- A drop-down menu that displays the names of controls on the form.

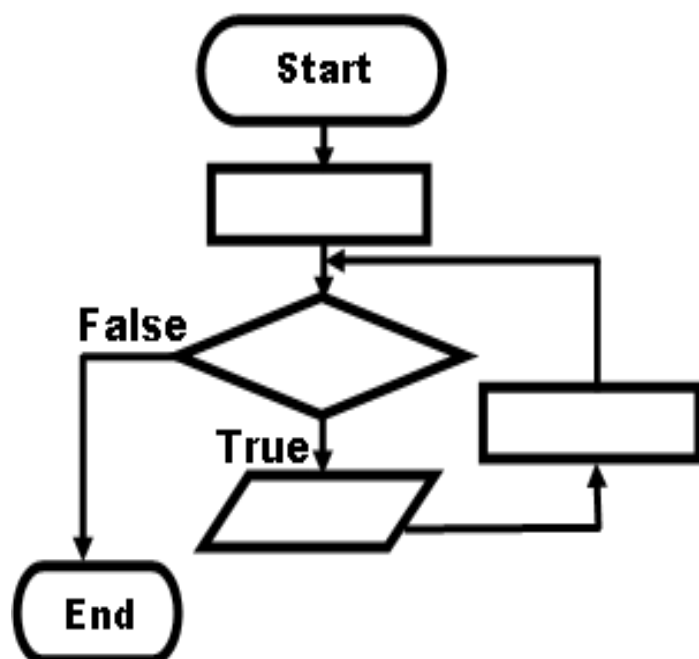
(Method Name – Code Window – Class Name)

Question3 :(A) Write the scientific term for the expression:-

1. Programs that translate commands and instructions written by the programmer from the high level language into machine language.
.....
2. The steps, activities, and processes to be done to reach an output or objective.
.....
3. The Control tool which can be used on the Form to choose Gender of the student "male" or "female".
.....
4. Visual Basic.NET language provides a window through which we can write instructions and codes of the program
.....

Question4: Arrange the following steps in the flowchart to print the odd numbers from (1) to (10)

Print M
$M = M + 2$
$M = 1$
$M \leq 10$



Question 1 : Put (✓) in front of the correct sentence and (X) in front of the wrong one:

1. The property Text is used in showing a certain text the title bar of user window.
2. The program testing is writing down all the steps taken to solve a problem.
3. Flowcharts help to facilitate understanding of the problem, analyse and convert it to a program.
4. The name, the size and colour of an object are all samples of events that can occur to the object in VB.net language.
5. Commands and instructions which we want to carry out are called properties.

Question 2 : Complete the Following:

- 1- Window through which we can write instructions and codes of the program called:...
- 2- The ControlTool which can be used on the Form and allows the user to choose more than one alternatives is:.....
- 3-It's a procedure which contains a code that is carried out when a corresponding event occurs.
- 4- The size of Label is defined automatically on the Form if the property AutoSize =.....
- 5-It is one of Controls which can be placed on the Form. When you click it, it does a certain task

Question ٣ : (A) Complete the correct answer :-

(Problem Solving - Visual Studio – RadioButton - Items)

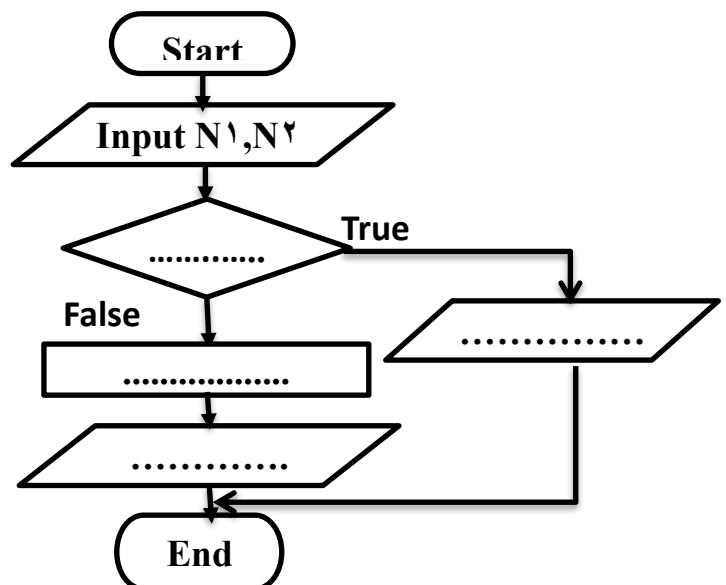
١. IDE is called:.....
٢. is the steps, activities, and processes to be done to reach an output or objective.
٣. The Control tool which can be used on the Form to choose Gender of the student "male" or "female" is:.....
٤. The ListBox and ComboBox share in this property :.....

B) Explain the following code:

(١) Label٢.Text = " تحيا مصر "

Question ٤ : (A) Complete the flowchart for a program that will calculate the division of two numbers N١,N٢. if the divisor N٢ equals (zero), the message displays "undefined"

B) The symbol is used to represent start and end of flowchart



كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9

